

Annual Report – Calendar Year 2018  
Kentucky Wetland and Stream Fee-In-Lieu-Of Mitigation Program

In Accordance with  
“Modification Number One of the Agreement Concerning In-Lieu Mitigation Fees  
between the U.S. Army Corp of Engineers and  
the Kentucky Department of Fish and Wildlife Resources”  
LRL-2010-325  
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## Introduction

This report provides information on the Kentucky Wetland and Stream Mitigation “Fee In-Lieu of” (FILO) Program sponsored by the Kentucky Department of Fish and Wildlife Resources (KDFWR) for the calendar year 2018 (CY18). This report refers to two periods in time called pre-Transition and post-Transition. October 2002 until January 2012 is considered pre-Transition. During this time, the FILO program operated under the “Agreement Concerning In-Lieu Mitigation Fees Between Kentucky Department of Fish and Wildlife Resources and U.S. Army Corps of Engineers.” This Agreement established that the Wetland and Stream Mitigation Trust Fund within KDFWR may receive mitigation in lieu-fees from Department of Army permittees and in exchange, KDFWR would identify, assess, and implement stream and wetland restoration opportunities in Kentucky.

In January 2012, the Agreement was replaced to comply with the 2008 Mitigation Rule (USACE 2008) and the resulting document is referred to as the Instrument (USACE 2011). This “Transition” from Agreement to Instrument separates pre-Transition and post-Transition. This is the seventh annual report since transitioning the program to comply with the 2008 Mitigation Rule. It is the first annual report under the most recent modification of the Instrument between the U.S. Army Corps of Engineers (USACE) and KDFWR (USACE 2018), which added the Northern Kentucky Service Area. The report includes information required under the terms of the Instrument and additional information related to the program for activities in CY18. The report includes program activities in the Louisville, Nashville, and Memphis USACE district offices.

In July 2000, the Kentucky Legislature passed KRS 150.255, which established The Kentucky Wetland and Stream Mitigation Fund. The KDFWR Wetland and Stream Mitigation Program manages this fund to provide a consistent and successful approach to fulfill compensatory mitigation requirements associated with the Clean Water Act Section 404 and Section 401, which are administered respectively by the USACE and the Kentucky Division of Water (KDOW). A Section 404 permit from the USACE and a Section 401 Water Quality Certification from KDOW are needed for activities that cause the permanent loss of streams or wetlands. These permits require compensatory mitigation for the losses. The intent of the mitigation is to offset the permanent loss of stream and wetland habitat within a defined watershed or regional area.

One option for 404 permit applicants to satisfy compensatory mitigation requirements is to purchase mitigation credits in-lieu of performing the mitigation themselves. This method of mitigation is termed “in-lieu fee mitigation.” The FILO program is a KDFWR-sponsored in-lieu fee mitigation program that is supported by sales of mitigation credits to Section 404 permit applicants to satisfy regulatory requirements. The monies generated pay for stream and wetland projects that improve degraded habitat in streams and wetlands throughout the Commonwealth.

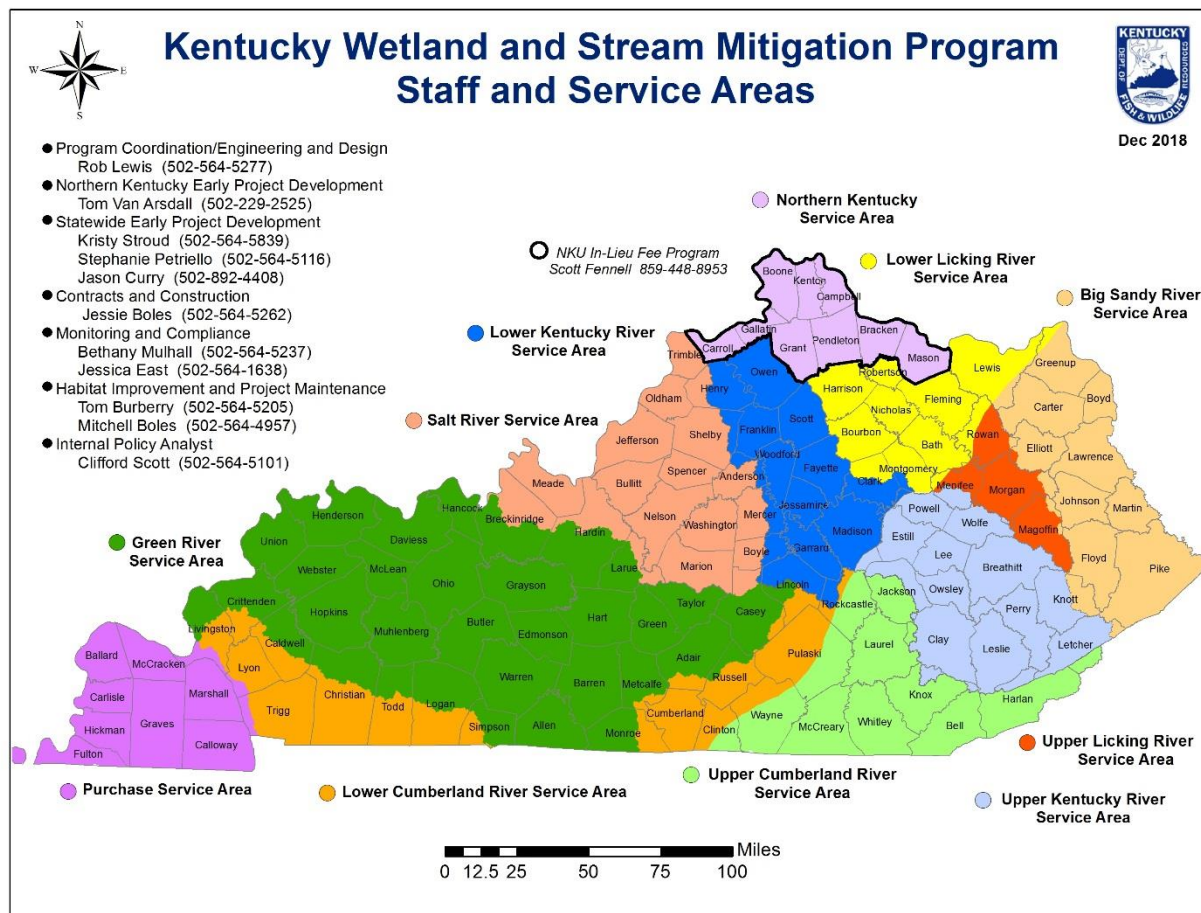
The USACE has Instruments with two separate in-lieu fee programs (or sponsors) in Kentucky: Northern Kentucky University (NKU) and KDFWR (**Figure 1**). The Instruments between the sponsors and the USACE ensure that the mitigation completed is sufficient to compensate for losses, provides permanent protection and long-term management, and adheres to applicable federal and state regulations and guidelines. By accepting in-lieu fee payments, the sponsor is assuming responsibility to provide compensatory mitigation pursuant to the terms of the

Instrument established with the USACE. By purchasing credits from an in-lieu fee program, developers seeking USACE permits are relieved of mitigation obligations.

The Instrument defines the roles of an Interagency Review Team (IRT) composed of the USACE, KDOW, and U.S. Fish and Wildlife Service (USFWS), pursuant to federal rules. The U.S. Environmental Protection Agency (USEPA) is not a signatory agency to the Instrument but can provide comments on individual mitigation projects during the USACE permit process. The function of the IRT is to review and comment on proposed projects, monitoring reports, remedial management measures, credit releases, and instrument modifications. The USACE consults with the IRT to provide oversight of mitigation programs. Although there are four USACE districts in Kentucky (Memphis, Nashville, Huntington, and Louisville), the Louisville District is the Lead District for communicating with the sponsor and coordinating with the IRT on issues related to the Instrument and it has assumed jurisdiction for Section 404 regulatory projects in the Huntington District's region of Kentucky. The individual districts are responsible for specific issues with projects under their jurisdiction.

Mitigation projects are implemented on private lands or on lands owned or acquired by KDFWR; therefore, the success of the program is in part dependent on cooperation with private landowners. Under additional restrictive selection criteria, the program also has the capability of preserving high quality aquatic resources through acquisition of properties with such resources and permanently protecting those areas through legal instruments and management. The Instrument requires that all KDFWR in-lieu fee projects be permanently protected through conservation easements, the purchase of lands with deed restrictions, or long-term management plans on public properties such as U.S. Forest Service National Forest lands. For private lands, this involves identifying landowners willing to cooperate with the sponsor to donate or sell a conservation easement or to sell the property in fee-simple.

Figure 1. Kentucky Wetland and Stream Mitigation Program Staff and Service Areas



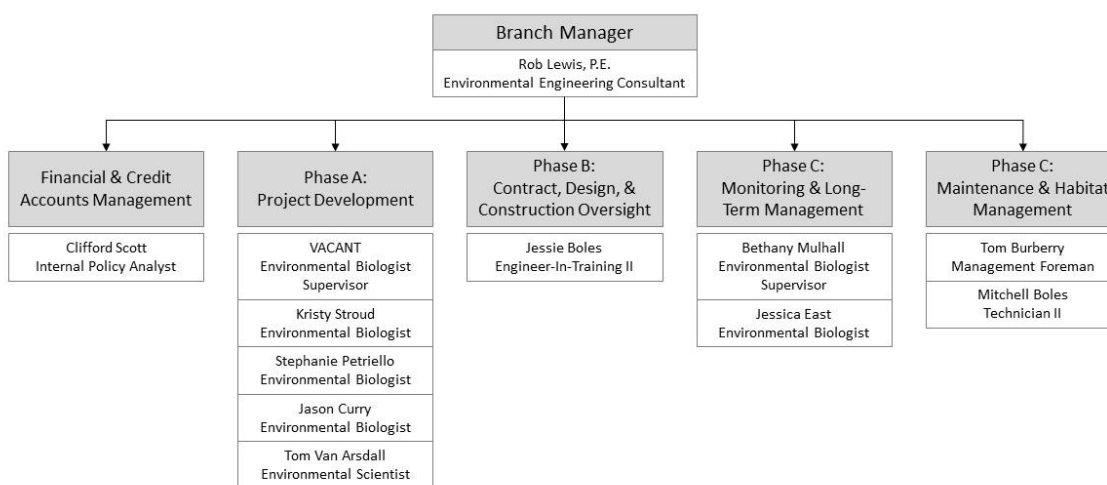
## Updated Agreement and Instrument Modifications

The Instrument went into effect on January 13, 2012 by Public Notice from the USACE. Its purpose was to comply with the 2008 Final Mitigation Rule (USACE 2008). The Instrument delineated service areas into ten units: Upper Kentucky River, Lower Kentucky River, Upper Cumberland River, Lower Cumberland River, Upper Licking River, Lower Licking River, Big Sandy River, Green River, Salt River, and Jackson Purchase Service Areas. In early 2018, a Modification to the Instrument added a Northern Kentucky Service Area comprising of nine counties overlapping with NKU's Instrument. Mitigation credits can now be purchased from either NKU or KDFWR in these nine counties (**Figure 1**). Ecological Integrity Units (EIUs) are mitigation credit units calculated by the Eastern Kentucky Stream Assessment Protocol (EKSAP) used in the Big Sandy and the three upper river service areas of the Eastern Kentucky Coalfield physiographic region. Adjusted Mitigation Units (AMUs) are mitigation credit units calculated by the Kentucky Assessment Protocol (KAP) used in the remaining service areas of the Commonwealth.

Thirteen projects have been permitted since early 2012 under the USACE Letter of Permission (LOP) process. USACE adds each project to the Instrument as modifications (**Appendix D**). Projects permitted in CY18 were: 1) Red Oak Drainage C Stream Restoration Project.

## FILO Staff and Assignments

Most FILO workload is allocated functionally into program operation and project stages: Financial and Credit Account Management; Phase A – Project Development; Phase B – Design and Construction; Phase C – Monitoring and Long Term Management. However, FILO staff often combine into teams to assist in any phase as needed. The flowchart below depicts FILO’s current organization:



This year saw the arrival of Jason Curry to the Phase A – Project Development section and the partial retirement of Tom Van Arsdall. Tom retired from the Phase A Supervisor position to become a part-time Environmental Scientist Consultant focused mainly on the Northern Kentucky Service Area. Staff numbered eleven individuals at the end of 2018.

## Landowner Contacts and Potential Project Site Visits

Potential project site visits made by FILO staff in CY18 are shown in **Table 1**; the table does not reflect the many landowner and realtor contacts that did not result in site visits. Consultants were used to locate potential projects in the Big Sandy, Upper Licking, Upper Kentucky, Upper Cumberland, Lower Cumberland, Green, and Northern Kentucky service areas. The table only shows sites visited by FILO staff and does not depict the complete effort of consultants.

Table 1. Initial Site Visits in CY18

Service Area	Site Name	County	Public or Private	Project Type	Land Protection
Big Sandy	Grassy Creek	Carter	Private	Stream	Fee Simple Purchase
Big Sandy	Sheepskin Branch	Elliott	Private	Stream	Conservation Easement
Big Sandy	Collier Creek	Elliott	Private	Stream	Conservation Easement
Big Sandy	Blythe Tract	Lawrence	Private	Stream	Conservation Easement
Green River	Wagoner Br	Allen	Private	Stream	Conservation Easement
Green River	Bender Hollow	Lincoln	Private	Stream and Wetland	Conservation Easement
Green River	Green River Forest Tract	Henderson	Private	Wetland	Fee Simple Purchase
Green River	Taylor Branch	Barren	Private	Stream	Conservation Easement
Jackson Purchase	Kaler Bottoms	Graves	Private	Wetland	Fee Simple Purchase
Jackson Purchase	Husband Road Wetland	McCracken	Private	Wetland	Fee Simple Purchase
Lower Cumberland	Bailey Branch	Monroe	Private	Stream and Wetland	Fee Simple Purchase
Northern Kentucky	Brushy Cr	Kenton	Private	Stream and Wetland	Fee Simple Purchase
Northern Kentucky	Trib to Banklick Cr	Kenton	Private	Stream	Conservation Easement
Northern Kentucky	Tribs to Doe Run Lake	Kenton	Public	Stream	Conservation Easement
Northern Kentucky	Banklick Cr Wetland	Kenton	Private	Wetland	Conservation Easement
Northern Kentucky	Big Bone Lick SP reservoir	Boone	Public	Stream and Wetland	Conservation Easement
Northern Kentucky	Trib to Middle Cr	Boone	Private	Stream	Fee Simple Purchase
Northern Kentucky	Camp Michael - Gunpowder Cr	Boone	Private	Stream and Wetland	Conservation Easement
Northern Kentucky	Steele Creek	Gallatin	Private	Stream	Fee Simple Purchase
Northern Kentucky	Owl Creek	Campbell	Private	Stream	Fee Simple Purchase
Salt River	Cabin Branch	Marion	Private	Stream	Conservation Easement
Salt River	Fisher Creek	Marion	Private	Stream	Conservation Easement
Salt River	Prospect Park - Harrods Creek	Jefferson	Public	Stream	Conservation Easement
Salt River	Buechel Park	Jefferson	Public	Stream	Conservation Easement
Salt River	Mill Creek	Jefferson	Public	Stream	Conservation Easement
Salt River	Harrison Fork II	Nelson	Private	Stream	Conservation Easement
Upper Cumberland	Lonesome Creek	Wayne	Private	Stream	Fee Simple Purchase
Upper Kentucky	Little Sextons Creek	Clay/Jackson	Private	Stream and Wetland	Fee Simple Purchase
Upper Kentucky	Quicksand Cr	Breathitt	Private	Stream	Fee Simple Purchase
Upper Kentucky	Doe Creek	Owsley	Private	Stream	Fee Simple Purchase
Upper Kentucky	Ross Creek	Estill	Private	Stream	Fee Simple Purchase
Upper Licking	Morgan County Extension District Wetland	Morgan	Public	Wetland	Combination
Upper Licking	Slabcamp Branch	Rowan	Both	Stream	Combination
Upper Licking	Schoolhouse Branch	Rowan	Public	Stream	Conservation Easement
Upper Licking	Rodburn Hollow	Rowan	Both	Stream	Conservation Easement
Upper Licking	Big Perry Branch	Rowan	Both	Stream	Conservation Easement
Upper Licking	Fisher Branch	Rowan	Private	Stream	Fee Simple Purchase



## Credit Costs and Status

The Instrument established 240,000 advance stream credits in each service area, except the Northern Kentucky Service Area, which established 100,000 advance stream credits. In addition, 100 wetland AMU advance credits were established in each service area except in the Green and Purchase service areas where 200 wetland AMU advance credits were provided.

In April 2018, the cost per stream credit for EIUs and AMUs was increased across all service areas except the Upper Licking River Service Area where it remained the same (**Table 2**). At the same time, the cost per wetland credit increased from \$45,840 to \$49,500 across all service areas.

In November 2014, credit sales were suspended in the Big Sandy Service Area due to: 1) the difficulty in finding mitigation projects meeting criteria (i.e. sites without mineral rights, property title or owner issues, or water quality issues); 2) the 3-year timeframe for initiating mitigation projects from the time fees were received was not going to be met; and 3) several large tracts of land involving thousands of potential mitigation credits that would have covered the obligation could not be developed further because of oil and gas interests. Credit sales had not been resumed by the end of CY18.

In CY18, FILO sold 3,865 stream EIUs, 19,705 stream AMUs, and 15.30 wetland AMUs (**Tables 3 & 4**). **Table 3** shows credit balances for streams and **Table 4** shows credit balances for wetlands in each service area. **Appendix A** presents individual credit sales.

*Table 2. Credit Costs (\$)*

<u>Service Area</u>	<u>Stream</u>					<u>Wetland</u>		
	<u>Cost/Credit</u>					<u>Cost/AMU</u>		
	Transition to 2012	Effective March 2012	Effective 01/15/15	Effective 06/01/17	Effective 04/20/18	Transition to 07/15/14	Effective 07/15/14	Effective 04/20/18
Big Sandy (EIU)	610	650	755 <sup>a</sup>	710 <sup>a</sup>	950 <sup>a</sup>	30,000 <sup>a</sup>	45,840 <sup>a</sup>	49,500 <sup>a</sup>
Upper Licking (EIU)	610	610	755	710	710	30,000	45,840	49,500
Upper Kentucky (EIU)	610	610	755	710	785	30,000	45,840	49,500
Upper Cumberland (EIU)	610	610	755	710	755	30,000	45,840	49,500
Lower Licking (AMU)	215	240	300	280	300	30,000	45,840	49,500
Lower Kentucky (AMU)	215	240	300	280	285	30,000	45,840	49,500
Lower Cumberland (AMU)	215	240	300	280	355	30,000	45,840	49,500
Green (AMU)	215	240	300	280	335	30,000	45,840	49,500
Salt (AMU)	215	240	300	280	325	30,000	45,840	49,500
Jackson Purchase (AMU)	215	240	300	280	340	30,000	45,840	49,500
Northern Kentucky (AMU)					385			49,500

<sup>a</sup>Big Sandy credit sales suspended November 17, 2014

Table 3. Advance Stream Credit Balances

Stream Credit Activity											
	Big Sandy (EIU)	Upper Kentucky (EIU)	Upper Licking (EIU)	Upper Cumberland (EIU)	Lower Kentucky (AMU)	Lower Licking (AMU)	Lower Cumberland (AMU)	Green (AMU)	Salt (AMU)	Jackson Purchase (AMU)	Northern Kentucky (AMU)
Advance Credits	240,000.00	240,000.00	240,000.00	240,000.00	240,000.00	240,000.00	240,000.00	240,000.00	240,000.00	240,000.00	100,000.00
Transition credits	23,103.00	-	258.00	3,954.00	-	11,419.00	6,977.00	14,251.00	3,883.00	19.00	-
CY2012 credits sold	2,376.28	2,349.86	838.00	3,182.19	807.00	11,012.00	8,893.00	10,724.60	1,338.15	-	-
CY2013 credits sold	5,707.60	999.13	-	49.50	14,654.20	-	1,917.71	1,621.85	4,928.00	-	-
CY2014 credits sold	3,535.58	2,037.17	-	52.25	606.00	1,411.00	2,346.00	14,688.21	5,607.09	-	-
CY2015 credits sold	2,599.45	965.86	7,431.00	5,062.99	3,095.00	10,935.00	2,413.20	1,405.40	7,968.80	1,209.49	-
CY2016 credits sold	176.60	7,398.89	931.00	22.03	409.00	3,399.72	850.00	2,343.00	3,968.00	1,140.00	-
CY2017 credits sold	163.83	5,368.72	4,215.60	132.45	1,123.00	861.35	36,635.50	3,016.00	83,154.00	-	-
CY2018 credits sold	421.00	2,944.00	-	499.70	1,204.00	1,530.00	-	-	11,297.00	480.00	5,194.00
Released Credits	1,412.00	455.00	-	3,502.60	4,423.00	2,429.00	-	-	-	-	-
Reserve Released Credits	-	-	-	-	-	-	-	-	-	-	-
Advance Credit Balance	203,328.66	218,391.37	226,326.40	230,547.49	222,524.80	201,860.93	179,967.59	191,949.94	117,855.96	237,151.51	94,806.00

Table 4. Advance Wetland Credit Balances

Wetland Credit Activity											
	Big Sandy (EIU)	Upper Kentucky (EIU)	Upper Licking (EIU)	Upper Cumberland (EIU)	Lower Kentucky (AMU)	Lower Licking (AMU)	Lower Cumberland (AMU)	Green (AMU)	Salt (AMU)	Jackson Purchase (AMU)	Northern Kentucky (AMU)
Advance Credits	100.000	100.000	100.000	100.000	100.000	100.000	100.000	200.000	100.000	200.000	100.000
Transition credits	3.550	-	-	2.250	1.800	0.980	9.980	10.280	2.540	2.300	-
CY2012 credits sold	2.410	-	-	0.381	1.032	-	4.180	7.444	-	-	-
CY2013 credits sold	0.024	1.200	-	3.360	3.170	-	-	3.814	1.900	0.820	-
CY2014 credits sold	0.577	-	-	4.572	0.400	-	3.600	5.700	-	-	-
CY2015 credits sold	-	-	14.220	7.278	2.120	-	0.700	11.190	0.723	-	-
CY2016 credits sold	-	3.300	-	-	1.310	-	-	4.500	16.300	-	-
CY2017 credits sold	-	8.950	-	-	0.300	-	5.483	3.360	17.200	-	-
CY2018 credits sold	-	2.100	-	0.200	2.100	-	-	7.400	3.500	-	-
Released Credits	-	-	-	-	-	-	-	-	-	-	-
Reserve Released Credits	-	-	-	-	-	-	-	-	-	-	-
Advance Credit Balance	93.439	84.450	85.780	81.959	87.768	99.020	76.057	146.312	57.837	196.880	100.000

## Program Financial Status

During CY18, credit sales brought in nearly \$10.3M total receipts, representing roughly \$8.2M in project funds (**Table 5**). For the second year in a row, the Salt River Service Area contributed the highest percentage of receipts (37%) totaling just over \$3.8M. The Upper Kentucky River Service Area had the second highest number of credit sales resulting in over \$2.2M in receipts and representing 22% of the total credit sales (**Table 5**). The largest category of receipts came from the Kentucky Transportation Cabinet at just over 56% (**Table 6**). The utility sector purchased the second highest number of credits representing just over 21% of the total.

*Table 5. CY18 Service Area Receipts and Project Funds (\$)*

Service Area	CY2018 Total Receipts	CY2018 Receipts to Reserve	CY2018 Receipts to Admin	CY2018 Receipts to Projects	CY2018 Beginning Project Balance Stream & Wetland	CY2018 Ending Project Balance Stream & Wetland	CY2018 Service Area % of Receipts
Big Sandy	400,000	40,000	40,000	320,000	18,429,173	18,749,173	4%
Upper Kentucky	2,283,539	228,354	228,354	1,826,831	10,856,764	12,683,596	22%
Lower Kentucky	442,902	44,290	44,290	354,322	4,410,620	4,764,942	4%
Upper Cumberland	380,154	38,015	38,015	304,123	6,844,024	7,148,147	4%
Lower Cumberland	-	-	-	-	13,078,078	13,078,078	0%
Upper Licking	-	-	-	-	7,768,826	7,768,826	0%
Lower Licking	442,900	44,290	44,290	354,320	7,306,733	7,661,053	4%
Salt	3,836,411	383,641	383,641	3,069,129	25,530,494	28,599,623	37%
Green	339,216	33,922	33,922	271,373	10,240,796	10,512,169	3%
Jackson Purchase	163,200	16,320	16,320	130,560	607,067	737,627	2%
Northern Kentucky	1,999,690	199,969	199,969	1,599,752	-	1,599,752	19%
<b>TOTALS</b>	<b>10,288,011</b>	<b>1,028,801</b>	<b>1,028,801</b>	<b>8,230,409</b>	<b>105,072,576</b>	<b>113,302,985</b>	<b>100%</b>

*Table 6. FILO Receipts by Source - CY18<sup>a</sup>*

<u>Source</u>	<u>Receipts (\$)</u>	<u>% of total</u>
KY Transportation Cabinet	5,770,835	56.1%
Municipal	60,450	0.6%
Development	731,232	7.1%
Utilities	2,197,540	21.4%
Mining	1,527,955	14.9%
Other	0	0.0%
<b>Total</b>	<b>10,288,011</b>	<b>100.0%</b>

<sup>a</sup>Funds returned as a result of closing a project account are no longer considered “new receipts”

## *Project Fund Status*

**Table 7** shows: 1) project funds received for streams and wetlands in each of the eleven service areas post-Transition through CY18; 2) funds currently allocated to “approved” projects; and 3) funds unallocated at the end of the year. Approximately \$60.8M is allocated to stream projects and roughly \$56.3M of stream project money is un-allocated, mostly in the Salt, Big Sandy, and Upper Kentucky River service areas. Approximately \$9.7M is over-allocated in the Lower Licking and Lower Kentucky River service areas.

Over \$5.8M in project funds has been collected for wetland mitigation since the Transition (**Table 7**), with about \$1.7M allocated, mostly in the Green River Service Area. Approximately \$4.1M of wetland funds is unallocated, mostly in the Salt River Service Area.

*Table 7. Allocated and Unallocated Project Funds for Stream and Wetland by Service Area (\$)*

<u>Basin</u>	<u>Stream</u>			<u>Wetland</u>			<u>Unallocated Service Area balance</u>
	<u>Project</u>	<u>Allocated</u>	<u>Unallocated</u>	<u>Project</u>	<u>Allocated</u>	<u>Unallocated</u>	
Big Sandy	18,597,032	7,972,235	10,624,797	152,141	0	152,141	10,776,938
Upper Kentucky	12,155,254	1,768,512	10,386,742	528,341	193,136	335,205	10,721,947
Lower Kentucky	4,397,793	6,918,273	(2,520,479)	367,148	133,620	233,528	(2,286,951)
Upper Cumberland	6,638,094	6,135,451	502,643	510,053	0	510,053	1,012,696
Lower Cumberland	12,441,736	6,325,120	6,116,616	636,343	0	636,343	6,752,959
Upper Licking	7,279,943	4,252,299	3,027,644	488,884	34,380	454,504	3,482,148
Lower Licking	7,638,994	14,839,800	(7,200,806)	22,059	0	22,059	(7,178,747)
Green	8,856,500	6,018,878	2,837,622	1,655,669	1,410,000	245,669	3,083,292
Salt	27,152,821	6,611,215	20,541,606	1,446,802	0	1,446,802	21,988,408
Jackson Purchase	662,198	0	662,198	75,429	0	75,429	737,627
Northern Kentucky	1,599,752	0	1,599,752	0	0	0	1,599,752
<b>Total</b>	<b>107,420,116</b>	<b>60,841,781</b>	<b>56,299,620<sup>a</sup> (9,721,285)<sup>b</sup></b>	<b>5,882,869</b>	<b>1,771,136</b>	<b>4,111,733</b>	<b>50,690,068</b>

<sup>a</sup>Total of unallocated funds

<sup>b</sup>Over-allocation of stream funds in 2 service areas (covered by Reserve funds)

## ***Reserve Fund***

Pursuant to the Instrument, the Reserve Fund was established to fund contingency actions and long term management. The Reserve Fund functions as an endowment and insurance to cover contingency needs and maintenance costs. It pays for additional mitigation projects, permanent protection activities, minor repair actions, and other activities not funded through service area or administrative accounts. Contributions to the Reserve Fund come from 10% of credit sales and 90% of accumulated interest. A non-wasting amount of \$3M was designated for the Reserve Fund. The balance of funds above the non-wasting limit is referred to as the “Active Reserve.” These funds can be spent for remedial actions or additional projects that generate a surplus of credits.

The contribution to the Reserve Fund during CY18 from credit sales and interest was \$3,204,361. The total Reserve Fund at the end of CY18 was \$14.9M, which results in an active Reserve Fund of \$11.9M when accounting for the \$3M non-wasting Reserve Fund required by the Instrument. **Table 8** gives a full accounting of the Reserve Fund, including those funds currently projected as needed in two service areas with an over-allocation of project funds. The over-allocation of project funds potentially generates mitigation credits with completed projects ‘on the ground’ in advance of impacts helping to address the 3-year timeframe requirement. Any additional receipts in the respective service areas will be used instead of the Reserve Fund. These additional receipts will reduce, if not remove, the need to ‘cover’ these over-allocated service areas with the Reserve Fund.

Each year, the program seeds a long term management and maintenance account with funds from the Reserve Fund to pay for management and minor remedial actions (**Table 8**). This allows the program to be responsive to the USACE and IRT in taking necessary remedial or maintenance actions.

*Table 8. CY18 Reserve Fund Activity and Balance (\$)*

CY2018	Beginning Cash Balance	\$ 21,459,699
CY2018	% from Stream Receipts	\$ 957,165
CY2018	% from Wetland Receipts	\$ 71,636
CY2018	% from Interest	\$ 2,175,560
CY2018	<b>CY2018 - Ending Reserve Cash Balance</b>	\$ 24,664,060
CY2018	CY2018 - Funds required for over-allocation of Lower KY SA stream projects	\$ (2,520,479)
CY2018	CY2018 - Funds required for over-allocation of Lower Licking SA stream projects	\$ (7,200,806)
CY2018	<b>CY2018 -Total Reserve Ending Balance (after Service Area obligations)</b>	\$ 14,942,774
CY2018	CY2018 - Non-wasting Reserve	\$ 3,000,000
CY2018	<b>CY2018 - Active Reserve Ending Balance</b>	\$ 11,942,774

### ***Administrative Fund***

The Administrative Fund is used for expenses associated with activities to operate the program and to identify new projects. Such activities include feasibility studies, consultant contracts for site searches, outreach and property work, staff salaries, equipment, and other indirect expenses such as travel and training. The Administrative Fund balance entering CY18 was \$10,457,970. During CY18, \$1,270,530 was added to the Administrative Fund from 10% of credit sales and 10% of the accumulated interest. **Table 9** details the use of the Administrative Fund during CY18, leaving a year-end balance of \$10,678,404. The CY18 total annual Operating Expenditures equaled \$1,192,907.

*Table 9. CY18 Administrative Fund Activity and Balance (\$)*

CY2018	Beginning Balance	\$ 10,457,970
CY2018	% from Stream Receipts	\$ 957,165
CY2018	% from Wetland Receipts	\$ 71,636
CY2018	% from Interest	\$ 241,729
CY2018	Operating Expenditures	\$ (892,811)
CY2018	Additional Operating Expenditures	\$ (300,096)
CY2018	Additional funding for LK, LL, Salt RSA FY17-18 service area fund	\$ (200,000)
CY2018	Additional funding for Big Sandy RSA FY17-18 service area fund	\$ (50,000)
CY2018	Additional funding for Preliminary Title and Survey	\$ (75,000)
CY2018	Sale of Ford Explorer, originally purchased from admin funded operating budget	\$ 5,000
CY2018	Fund feasibility study for Big Bone Lick	\$ (30,000)
CY2018	Fund NKY, LK, LL RSA 19-20 service area fund	\$ (100,000)
CY2018	Fund Green, LC JP RSA FY19-20 service area fund	\$ (100,000)
CY2018	Fund Salt RSA FY19-20 service area fund	\$ (100,000)
CY2018	Fund BS, UC, UL RSA FY19-20	\$ (100,000)
CY2018	CY2017 - Ending Balance	\$ 10,678,404

## Mitigation of Impacts

Prior to the 2008 Mitigation Rule fully taking effect with the Instrument in early 2012, it was not possible to relate mitigation impacts caused by 404-permitted activities because in-lieu-fee payments to FILO had little documentation regarding the quantity, quality, and flow regime of stream impacts. This was especially true during the first few years of the in-lieu fee program. It was assumed that impacts and mitigation occurred on similar stream flow types, resulting in similar linear feet affected. Thus, the pre-Transition programmatic success was based on cost per linear foot. The available data could track the amount of in-lieu fees received and the timing of the allocation of those funds to mitigation projects. With the implementation of the Instrument and the conversion of unallocated funds to credits, it is possible to compare impacts (Advance Credits sold by FILO) to mitigation (Advance Credits fulfilled by FILO) for projects that began (approved by the IRT) post-Transition. Many of the projects reported here were permitted prior to the Transition.

## Actions Taken by Interagency Review Team

Fifteen conceptual plans were submitted and thirteen IRT site visits were conducted in CY18 (**Table 10**). Seven of the thirteen projects were approved and six were still awaiting IRT comments at the end of CY18. The two site visits not yet conducted were scheduled for early 2019.

*Table 10. CY18 Conceptual Plans Submitted, Actions of Interagency Review Team, Subsequent Activity*

Project	Service Area	USACE District	County	Type	CP Submitted	IRT Site Visit	Status
Trammel Creek II	Green	Louisville	Allen	Stream	April	5/4/2018	Approved
Weirs Creek Wetland	Green	Louisville	Hopkins	Wetland	September	12/11/2018	Pending IRT Approval
Bender Hollow	Green	Louisville	Lincoln	Stream	November	2019	
Ferguson Creek	Lower Cumberland	Nashville	Livingston	Stream	March	5/1/2018	Approved
Elkton Lake	Lower Cumberland	Nashville	Todd	Stream	June	7/12/2018	Approved
Steele Creek	Northern Kentucky	Louisville	Gallatin	Stream	October	2019	
Stillwell Branch	Salt	Louisville	Larue	Stream	January	3/5/2018	Approved
Dodge Gap	Salt	Louisville	Jefferson	Stream	January	3/7/2018	Approved
Big Lick Hollow	Salt	Louisville	Nelson	Stream	April	5/21/2018	Approved
Harrods Creek	Salt	Louisville	Jefferson	Stream	June	10/10/2018	Pending IRT Approval
Lonesome Creek	Upper Cumberland	Nashville	Wayne	Stream	June	8/23/2018	Pending IRT Approval
Little Sexton Creek	Upper Kentucky	Louisville	Clay/Jackson	Stream	November	12/14/2018	Pending IRT Approval
Horse Mill Branch	Upper Licking	Louisville	Morgan	Stream and Wetland	January	2/27/2018	Approved
Slabcamp Branch	Upper Licking	Louisville	Rowan	Stream	June	9/5/2018	Pending IRT Approval
Morgan Co Extension District Wetland	Upper Licking	Louisville	Morgan	Wetland	August	11/7/2018	Pending IRT Approval



## Project Statistics and Status

The IRT has approved 115 projects over the FILO program's 17-year history (2002-2018) (**Figure 2**). Seventy-four projects (Ross Creek I and II, approved as two separate projects, are now a single project) have been completed or are in various stages of development (**Figure 3; Appendix B**). Of these projects, 46 (62%) were originally or are now on land owned by a government, education, or conservation organization. Twenty-eight projects (38%) are on private land and have or will have conservation easements.

The IRT has approved 40 projects since the FILO program's inception that have not been constructed, typically because of property issues such as mineral rights or title concerns, cost, or because of landowner issues. These projects were approved but later terminated after initial site inspection, property and title investigation, project and conceptual plan development, IRT site visit and comment, or occasionally survey and even design (**Appendix B**).

*Figure 2. IRT Approved Projects over FILO's 17-year History*

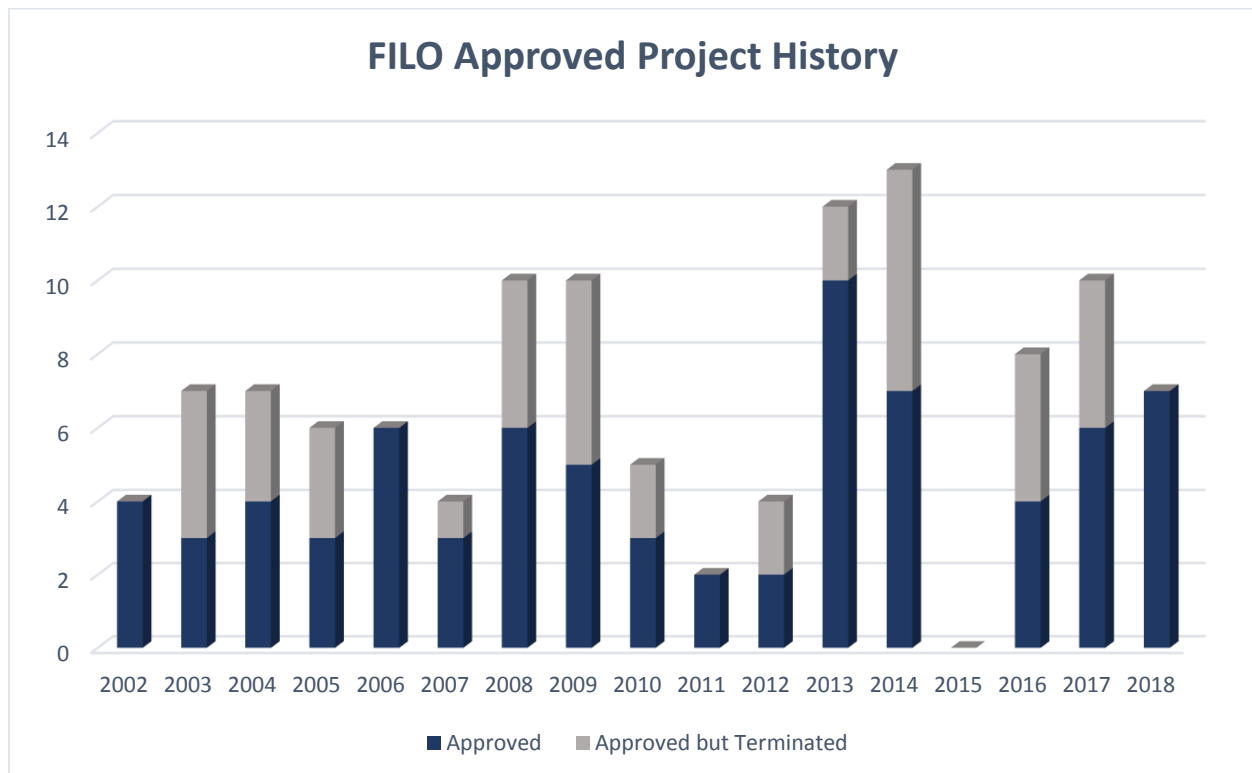
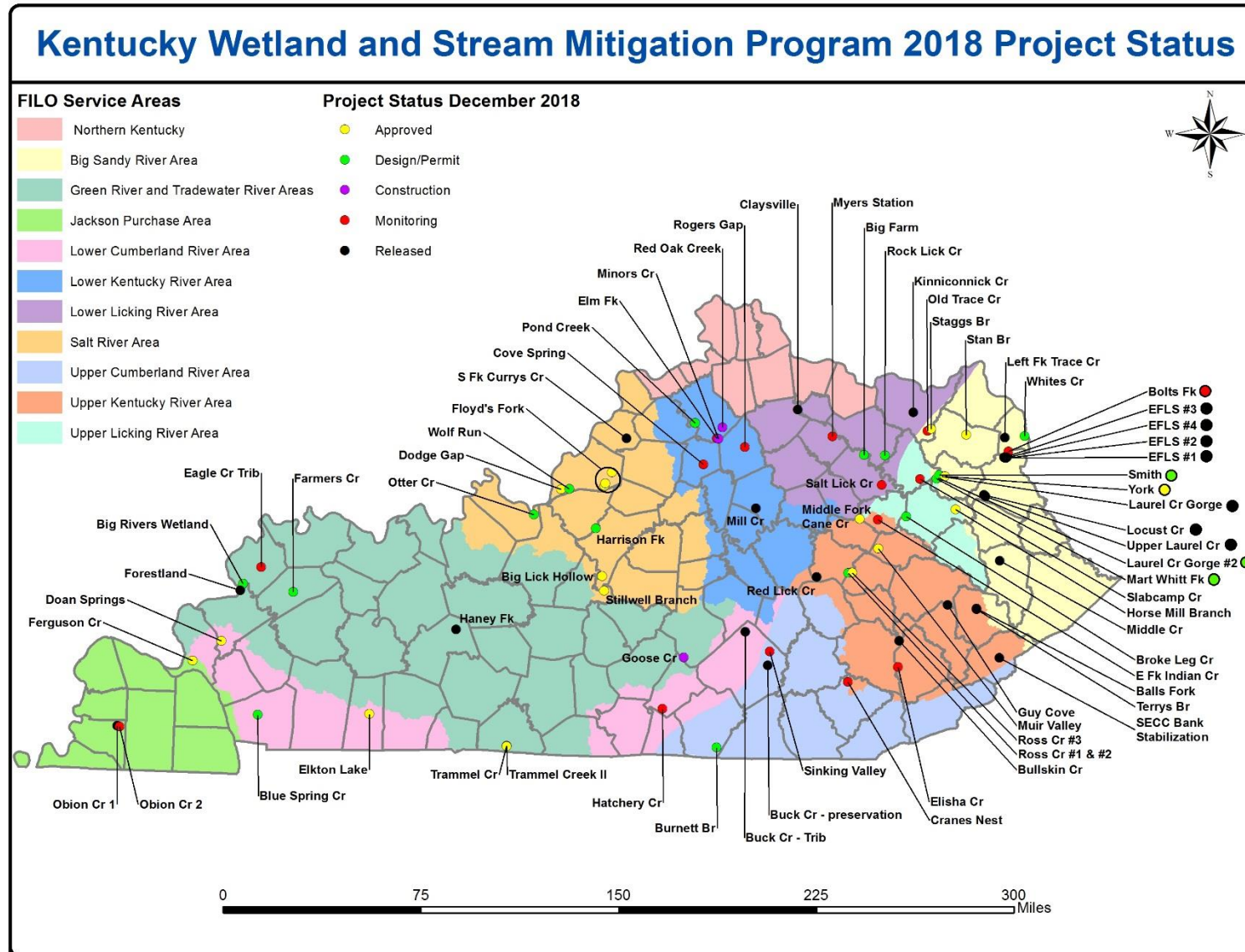


Figure 3. Kentucky Wetland and Stream Mitigation Program CY18 Project Status



### ***Big Sandy River Service Area – Active Project Status***

There are nine active projects in this service area and ten in the Long Term Management phase. These projects fall within the USACE Louisville District and the EKSAP region, which utilizes the EIU credit system (**Appendix B: Figure 4, Table 11**).

Bolts Fork, Boyd County. FILO submitted the Year 5 monitoring report in December 2018. Invasive species management occurred throughout the monitoring period and targeted multiflora rose, Johnson grass, autumn olive, and black alder. A bank repair was attempted in August 2018 at the upstream end of the project on the right descending bank. A “lighter-touch” approach was used with the intent to maximize the vegetative component in that area. Unfortunately, this effort was unsuccessful and a large rain event damaged the area before vegetation could establish. Efforts to repair the area again with more aggressive techniques are underway and pending favorable weather conditions. Supplemental planting will follow the repair.

Laurel Creek Gorge #2 (Greene-Johnson tracts), Elliott County. The property is now part of the Ed Mabry-Laurel Gorge WMA. It has been combined with other properties (Smith Property and Mart Whitt Fork) purchased around the WMA into one design-build project. In 2018, FILO received a Floodplain permit and applied for a 401 WQC permit.

Mart Whitt Fork, Elliott County. The property is now part of the Ed Mabry-Laurel Gorge WMA. It has been combined with other properties (Smith Property and Laurel Creek Gorge #2) purchased around the WMA into one design-build project. In 2018, FILO received a Floodplain permit and applied for a 401 WQC permit.

Old Trace Creek, Lewis County. Approved in 2013, KDFWR purchased the property in March 2014. The design-build contract started in 2015 and construction began in 2017. Construction and planting were completed in early 2018, commencing the first year of monitoring. FILO submitted the Year 1 monitoring report in December 2018. Some remedial actions may be necessary and they will be covered by the construction warranty.

Smith Property, Elliott County. The 46-acre tract was purchased in November of 2015 and is an addition to the Ed Mabry-Laurel Gorge WMA. It has been combined with other properties (Mart Whitt Fork and Laurel Creek Gorge #2) purchased around the WMA into one design-build project. In 2018, FILO received a Floodplain permit and applied for a 401 WQC permit.

Staggs Branch, Lewis County. Approved in early 2016, the property was sold to another landowner before KDFWR could proceed with the purchase. The new landowner is willing to consider a compensated conservation easement along the streams and is interested in buying the upstream property. FILO is waiting to move forward until that acquisition is complete.

Stan Branch, Carter County. Approved in late 2016, this property is roughly 190 acres. In 2017, the landowner was asked to address and resolve some title issues before KDFWR can move forward with the property purchase. There was no additional progress in 2018.

Whites Creek, Boyd County. In 2015, a landowner contract was signed, a contract for an easement survey was initiated, and the 30% design was completed, including a geotechnical exploration survey on a minor slide near the project area. In 2016, the Floodplain permit was received and in 2017, the Mitigation Plan was completed. In 2018, FILO received the 401 WQC permit and applied for a 404 permit.

York Property, Elliott County. The project was approved in 2014 and it will add to the Ed Mabry-Laurel Gorge WMA. Several property issues are in the process of being resolved.

### ***Upper Cumberland River Service Area – Active Project Status***

There are three active projects in this service area and one in the Long Term Management phase. These projects are within the USACE Nashville District and the EKSAP region, which utilizes the EIU credit system (**Appendix B: Figure 5, Table 12**).

Burnett Branch, Wayne and McCreary Counties. FILO partnered with the KDOW Wild Rivers program to acquire the property for preservation and restoration. In 2015, the mineral rights were acquired on an initially excepted portion of the property. In 2016, FILO reassessed the entire property according to the Nashville USACE's new stream assessment protocol. In 2017, the property's deed was amended to include restrictions with language suitable to USACE. In 2018, the Mitigation Plan was completed and the project was put on public notice in preparation for the 401 WQC permit submittal in early 2019.

Cranes Nest Branch, Knox County. FILO submitted the Year 5 monitoring report in December 2017. The IRT and FILO conducted a compliance visit in April 2018. The KDOW released the project from monitoring. Monitoring release from the USACE Nashville District is pending the minor repair of a cross vane structure. Weather depending, the tentative schedule for repair is early 2019. Upon repair of the structures, FILO will submit photos and a work log to the IRT.

Sinking Valley, Pulaski County. The Mitigation Plan for preservation was accepted in December 2013. This project has bi-annual monitoring requirements for 10 years with the most recent report submittal in 2017. FILO staff will monitor the site in 2019 and submit a report.

### ***Lower Cumberland River Service Area – Active Project Status***

There are five active projects in this service area and one in the Long Term Management phase. These projects are within the USACE Nashville District and the KAP region, which utilizes the AMU credit system. This service area has two distinct geographic areas in Kentucky, one in Western Kentucky and one in south-central Kentucky (**Appendix B: Figure 6, Table 13**).

Blue Spring Creek, Trigg County. The project is entirely within Lake Barkley State Resort Park with a substantial part on the park's golf course. FILO is waiting on an agreement with the Parks Department to modify the deed so that a 404 permit can be issued.

Doan Springs, Crittenden County. This site was conditionally approved in 2017. The IRT requested additional wetland delineations and there is a need for some property issues to be resolved before FILO can move forward.

Elkton Lake, Todd County. IRT approved in 2018, this project intends to breach the dam and restore running water habitat to several stream channels currently inundated by the lake. The City of Elkton and four private landowners are all involved in the project area. Over 15,000 stream AMUs are anticipated with the completion of this project and it will be permanently protected with conservation easements.

Ferguson Creek, Livingston County. IRT approved in 2018, this project would generate over 6,000 stream AMUs and would be permanently protected with a conservation easement.

Hatchery Creek, Russell County. Construction began in August 2014 with final project completion in early 2016. FILO submitted the Year 3 monitoring report in 2018. Remedial actions described in the report include invasive species management and supplemental native plantings of bare root trees, RPM trees, and wetland herbaceous plugs.

#### ***Upper Licking River Service Area – Active Project Status***

There are three active projects in this service area. These projects are within the USACE Louisville District and the EKSAP region, which utilizes the EIU credit system (**Appendix B: Figure 7, Table 14**).

Broke Leg Creek, Morgan County. Approved in late 2016, this property has over 35,000 feet of stream length. In 2017, the landowner signed a land contract with the intent to donate a conservation easement. In 2018, a consultant continued to collect survey data and started on initial design work.

Horse Mill Branch, Morgan County. IRT approved in 2018, this project would be a fee simple purchase of roughly 500 acres. It is expected to generate over 9,000 stream EIUs and up to 4.8 wetland AMUs. The project would be permanently protected with deed restrictions.

Slabcamp Creek/Stonecoal Branch, Rowan County. FILO submitted the Year 5 monitoring report in 2017. The IRT and FILO conducted a compliance visit in April 2018, in which project concerns prompted additional monitoring and follow-up compliance visits to occur in 2019.

#### ***Lower Licking River Service Area – Active Project Status***

There are four active projects in this service area and one in the Long Term Management phase. These projects are within the USACE Louisville District and the KAP region, which utilizes the AMU credit system (**Appendix B: Figure 8, Table 15**).

Big Farm, Bath County. The project was approved in 2014 and the 490-acre property was purchased in 2015. It is now part of the Clay WMA. The design-build contract was opened in early 2016. FILO is awaiting the 401 WQC.

Myers Station, Nicholas County. The 462-acre property was purchased in 2014 and became part of the Clay WMA. The As-built and Year 1 monitoring report were submitted in 2017, and FILO submitted the Year 2 report in 2018. FILO is currently working to finalize plans regarding supplemental planting and invasive species managed across the site.

Rock Lick Creek, Fleming County. Approved in 2017, this project will provide approximately 34,000 stream credits. The state-owned Maxey Flats property is roughly 1,000 acres and contains a former radioactive waste disposal site. In 2018, FILO hired a consultant to start collecting data for a project design.

Salt Lick Creek, Bath County. The IRT and FILO conducted a compliance visit in early 2018, which prompted the IRT to request additional monitoring information. FILO submitted the remedial monitoring plan and monitoring release request in December 2018.

### ***Upper Kentucky River Service Area – Active Project Status***

There are six active projects in this service area and six in the Long Term Management phase. These projects are within the USACE Louisville District and the EKSAP region, which utilizes the EIU credit system (**Appendix B: Figure 9, Table 16**).

East Fork Indian Creek, Menifee County. The project is in the Daniel Boone National Forest, with permanent protection provided by the U.S. Forest Service (USFS) Management Plan. The project received a Regional Forester’s Award from the Southern Region of the U.S. Forest Service in the category of “Restored and Resilient Landscapes.” In 2018, FILO planted additional live stakes, bare root trees, and RPM trees to improve woody stem density and diversity. FILO also initiated a contract with Eastern Kentucky University to provide additional monitoring on fish passage throughout the project reach using PIT and VIE mark-recapture techniques. This effort will continue through 2019. There are some areas identified for repairs as noted in the 2018 report and during field visits. FILO will further develop the repair plan in 2019.

Elisha Creek, Leslie County. The project is in the USFS Daniel Boone National Forest, with permanent protection provided by the USFS Management Plan. The IRT and FILO conducted a compliance visit in early 2018 with several issues noted. FILO collected data in 2018 and early 2019 and plans to submit a remedial monitoring plan in March 2019.

Middle Fork Cane Creek, Powell County. The project was approved in early 2017 and it will provide over 2,700 stream credits. KDFWR plans to purchase the property which may become a WMA. No progress has been made on purchasing the property.

Muir Valley, Wolfe County. The project was approved in early 2017 and it will provide over 6,200 stream credits. FILO and the landowner are working to resolve some title issues before moving forward.

Ross Creek 1 & 2, Lee and Estill County. The project is adjacent to the USFS Daniel Boone National Forest. The 640-acre property was purchased in 2014. In 2017, FILO received all permits

and the design was completed. In 2018, the project was bid for a construction contract. Once the construction is complete, the property will become public access as a WMA.

Ross Creek III, Lee County. This project was approved in 2017. KDFWR plans to purchase the property, which is adjacent to the Ross Creek 1 & 2 projects, and add it to the proposed WMA.

### ***Lower Kentucky River Service Area – Active Project Status***

There are six active projects in this service area and one in the Long Term Management phase. These projects are within the USACE Louisville District and the KAP region, which utilizes the AMU credit system (**Appendix B: Figure 10, Table 17**).

Boling Branch, Henry County. The project was approved in 2017 and KDFWR planned to purchase the property as it adjoins the existing Kentucky River WMA. However, this project was terminated in 2018 after the landowner refused to accept KDFWR's offer.

Cove Spring, Franklin County. The project is in Cove Spring Park, owned by the City of Frankfort. Construction began in 2012 and the final planting was completed in 2014. FILO submitted the Year 5 monitoring report in 2018 and scheduled a compliance visit for early 2019 to discuss releasing the project from monitoring.

Elm Fork, Owen County. The project is on Kleber WMA and is accessible to the public. Construction began in 2013 and it was completed in 2014. In 2018, FILO submitted the Year 4 report and completed minor structure repairs on the project tributaries.

Minors Creek, Owen County. The 309-acre property was purchased in 2014 and is now a part of the Kleber WMA. Construction began in the fall of 2017 and continued throughout 2018.

Pond Creek, Owen County. The project is on the Chesney Tract of the Kentucky River WMA. It was approved in 2015 and the design started the same year. In 2016, FILO asked the design consultant for some design modifications. No additional progress was made in 2018.

Red Oak Creek, Owen County. The project was approved in 2014 and was purchased in 2015. The 601-acre property was added to the Dr. James Rich WMA and design began in 2016. In 2017, FILO received the 401 WQC and submitted the 404 permit application. In 2018, FILO received the 404 permit and began construction.

Rogers Gap, Scott County. The project included the acquisition of 2,500 acres containing approximately 28 miles of stream channel. The design-build started in 2013 and construction was completed in 2016. FILO submitted the Year 2 monitoring in 2018.

### ***Salt River Service Area – Active Project Status***

There are seven active projects in this service area and one that entered the Long Term Management phase in 2018. These projects are within the USACE Louisville District and the KAP region, which utilizes the AMU credit system (**Appendix B: Figure 11, Table 18**).

Big Lick Hollow, Nelson County. IRT approved in 2018, this project was presented as part of the Full Delivery contract with Stantec Consulting Services Inc. It is expected to generate over 21,000 AMU stream credits and will be permanently protected with a conservation easement.

Dodge Gap, Jefferson County. IRT approved in 2018, this project is in the Jefferson Memorial Forest. It is expected it generate roughly 4,900 stream AMUs and will be permanently protected with a conservation easement.

Floyd's Fork, Jefferson County. IRT approved in early 2016, this project is comprised of three separate areas: Big Vista Valley, Turkey Run, and Big Beech Woods. Altogether, there is the potential for over 12,000 stream AMUs and 5.5 wetland AMUs. After several attempts to proceed with the project, a new point of contact was established in 2018.

Harrison Fork, Nelson County. In 2018, The University of Louisville applied for a 401 WQC permit.

Otter Creek, Meade County. The project has the largest watershed of any FILO project with just over 100 square miles. Because of its size, good water quality, and significant physical degradation, the potential exists to create outstanding habitat that will support an excellent fishery and canoe recreation. The project is still being designed and the Environmental Assessment is still being drafted.

South Fork Curry's Fork, Oldham County. The project was constructed in 2012 and the Year 5 monitoring report was submitted in 2017. The IRT and FILO conducted a compliance visit in early 2018, after which, the IRT released the site from monitoring. This site has moved to the Long Term Management phase.

Stillwell Branch, Larue County. IRT approved in 2018, this project is on KDFWR's Rolling Fork WMA. It is expected to generate over 42,000 AMU stream credits and will be permanently protected with deed restrictions.

Wolf Run, Jefferson County. The project is almost entirely on the Jefferson Memorial Forest. It will be developed in coordination with the Louisville-Jefferson County Metro Parks. Design began in late 2015. There were no new developments in 2018.



### ***Green River Service Area – Active Project Status***

There are six active projects in this service area and two in the Long Term Management phase. These projects are within the USACE Louisville District and the KAP region, which utilizes the AMU credit system (**Appendix B: Figure 12, Table 19**).

Big Rivers WMA Wetland, Union County. The project was approved in 2017. It is located on the existing Big Rivers WMA and it will provide over 32 wetland credits. In 2018, FILO hired a consultant to collect data and start on a project design.

Eagle Creek Tributary, Union County. The project is entirely within the Higginson-Henry WMA. The responsibility for fixing several plugs in the abandoned main channel is still awaiting resolution between the design consultant and the contractor. In order to assess the current conditions of the site, monitoring commenced with the Year 2 report submitted in 2018.

Farmers Creek, Webster County. The wetland and stream project was approved in 2014 and it involves three private landowners and the Lee K. Nelson WMA. In 2017, FILO learned that one of the three private landowners involved in the project was going to sell her property. KDFWR will try to purchase that piece of land to keep the design intact. The design is still at 30% completion.

Goose Creek, Casey County. The project was approved in 2013. Construction started in 2017 and continued throughout the entire year of 2018.

Trammel Creek, Allen County. FILO submitted the Year 5 monitoring report in 2014. However, the need for additional repairs and planting extended monitoring. In 2017, FILO planted additional native trees of various sizes and submitted the Year 8 monitoring report. In 2018, FILO identified more structure repairs needed. The plan for repair is under development and will commence in 2019. The easement expansion on the property was complete in 2018.

Trammel Creek II, Allen County. IRT approved in 2018, this project is directly downstream of the original Trammel Creek project. It is estimated to generate roughly 3,600 AMU stream credits and it will be permanently protected with a conservation easement.

### ***Jackson Purchase Service Area – Active Project Status***

There is one active project in this service area and one in the Long Term Management phase. These projects are within the USACE Memphis District and the KAP region, which utilizes the AMU credit system (**Appendix B: Figure 13, Table 20**).

Obion Creek #2, Hickman County. The monitoring firm requested an extension for the Year 2 monitoring report submission. FILO anticipates submitting the Year 2 monitoring report in March 2019.

## References

U.S. Army Corps of Engineers. 2018. Modification of the Agreement Concerning In-Lieu Mitigation Fees between U.S. Army Corps of Engineers and Kentucky Department of Fish and Wildlife Resources. Modification #8 Adding a Northern Kentucky Service Area. LRL-2010-325.

U.S. Army Corps of Engineers. 2011. Modification – Number One of the Agreement Concerning In-Lieu Mitigation Fees between U.S. Army Corps of Engineers and Kentucky Department of Fish and Wildlife Resources. LRL-2010-325.

U.S. Army Corps of Engineers. 2008. 33 CFR Chapter II Part 332. Compensatory Mitigation for Losses of Aquatic Resources. Federal Register Vol. 73, No. 70, April 10, 2008.

## **Appendix A – CY 17 Credit Sales, Costs, and Balances**

Service Area	Date of Payment	Corps 404 Id. No.	Credits Sold	\$/Credit	Advanced Credits	Balance
Big Sandy Stream (EIU)	06/04/18	LRL-2007-1026; LRL-2007-1206; 200400336	421.00	\$950	CY2018 Beginning Balance	203,749.66
					CY2018 Credit Sales	421.00
					CY2018 Credit Releases	-
					CY2018 Ending Balance	203,328.66
		<b>CY2018 TOTAL CREDITS SOLD</b>	<b>421.00</b>			
Upper Kentucky Stream (EIU)	01/31/18	LRL-2015-981	606.00	\$710	CY2018 Beginning Balance	220,880.37
	02/26/18	LRL-2016-967 (1)	567.00	\$710	CY2018 Credit Sales	2,944.00
	03/27/18	LRL-2016-967 (2)	475.00	\$710	CY2018 Credit Releases	455.00
	10/10/18	LRL-2008-654	1,296.00	\$785	CY2018 Ending Balance	218,391.37
		<b>CY2018 TOTAL CREDITS SOLD</b>	<b>2,944.00</b>			
Upper Licking Stream (EIU)					CY2018 Beginning Balance	226,326.40
					CY2018 Credit Sales	-
					CY2018 Credit Releases	-
					CY2018 Ending Balance	226,326.40
		<b>CY2018 TOTAL CREDITS SOLD</b>	<b>-</b>			
Upper Cumberland Stream (EIU)	02/12/18	LRN-2010-00267 (1)	47.00	\$710	CY2018 Beginning Balance	231,047.19
	03/14/18	LRN-2010-00267 (2)	109.00	\$710	CY2018 Credit Sales	499.70
	09/18/18	LRN-2018-00155	343.70	\$755	CY2018 Credit Releases	
					CY2018 Ending Balance	230,547.49
		<b>CY2018 TOTAL CREDITS SOLD</b>	<b>499.70</b>			
Lower Kentucky Stream (AMU)	01/22/18	LRL-2012-277	450.00	\$280	CY2018 Beginning Balance	222,322.80
	02/14/18	LRL-2017-962	168.00	\$280	CY2018 Credit Sales	1,204.00
	08/17/18	LRL-2018-213	160.00	\$285	CY2018 Credit Releases	1,406.00
	11/06/18	LRL-2018-302	426.00	\$285	CY2018 Ending Balance	222,524.80
		<b>CY2018 TOTAL CREDITS SOLD</b>	<b>1,204.00</b>			
Lower Licking Stream (AMU)	03/23/18	LRL-2015-900	805.00	\$280	CY2018 Beginning Balance	203,390.93
	09/28/18	LRL-2016-458	725.00	\$300	CY2018 Credit Sales	1,530.00
					CY2018 Credit Releases	-
					CY2018 Ending Balance	201,860.93
		<b>CY2018 TOTAL CREDITS SOLD</b>	<b>1,530.00</b>			-

Service Area	Date of Payment	Corps 404 Id. No.	Credits Sold	\$/Credit	Advanced Credits	Balance
<b>Lower Cumberland Stream (AMU)</b>					CY2018 Beginning Balance	179,967.59
					CY2018 Credit Sales	-
					CY2018 Credit Releases	-
					CY2018 Ending Balance	179,967.59
			<b>CY2018 TOTAL CREDITS SOLD</b>	<b>-</b>		
<b>Salt Stream (AMU)</b>	04/16/18	LRL-2016-136	72.00	\$280	CY2018 Beginning Balance	129,152.96
	12/20/18	LRL-2018-634	11,225.00	\$325	CY2018 Credit Sales	11,297.00
					CY2018 Credit Releases	-
					CY2018 Ending Balance	117,855.96
			<b>CY2018 TOTAL CREDITS SOLD</b>	<b>11,297.00</b>		
<b>Green River Stream (AMU)</b>					CY2018 Beginning Balance	191,949.94
					CY2018 Credit Sales	-
					CY2018 Credit Releases	-
					CY2018 Ending Balance	191,949.94
			<b>CY2018 TOTAL CREDITS SOLD</b>	<b>-</b>		
<b>Jackson Purchase Stream (AMU)</b>	06/21/18	LRL-2017-19	480.00	\$340	CY2018 Beginning Balance	237,631.51
					CY2018 Credit Sales	480.00
					CY2018 Credit Releases	-
					CY2018 Ending Balance	237,151.51
			<b>CY2018 TOTAL CREDITS SOLD</b>	<b>480.00</b>		
<b>Northern Kentucky Stream (AMU)</b>	12/27/18	LRL-2015-329	5,194.00	\$385	CY2018 Beginning Balance	100,000.00
					CY2018 Credit Sales	5,194.00
					CY2018 Credit Releases	-
					CY2018 Ending Balance	94,806.00
			<b>CY2018 TOTAL CREDITS SOLD</b>	<b>5,194.00</b>		

Service Area	Date of Payment	Corps 404 Id. No.	Credits Sold	\$/Credit	Advanced Credits	Balance
Upper Kentucky Wetland (AMU)	01/31/18	LRL-2015-981	1.800	\$45,840	CY2018 Beginning Balance	86.550
	02/26/18	LRL-2016-967	0.300	\$45,840	CY2018 Credit Sales	2.100
					CY2018 Credit Releases	-
					CY2018 Ending Balance	84.450
		<b>CY2018 TOTAL CREDITS SOLD</b>	<b>2.100</b>			
Upper Licking Wetland (AMU)					CY2018 Beginning Balance	85.780
					CY2018 Credit Sales	-
					CY2018 Credit Releases	-
					CY2018 Ending Balance	85.780
		<b>CY2018 TOTAL CREDITS SOLD</b>	<b>-</b>			
Upper Cumberland Wetland (AMU)	11/19/18	LRL-2017-1225	0.200	\$49,500	CY2018 Beginning Balance	82.159
					CY2018 Credit Sales	0.200
					CY2018 Credit Releases	-
					CY2018 Ending Balance	81.959
		<b>CY2018 TOTAL CREDITS SOLD</b>	<b>0.200</b>			
Big Sandy Wetland (AMU)					CY2018 Beginning Balance	93.439
					CY2018 Credit Sales	-
					CY2018 Credit Releases	-
					CY2018 Ending Balance	93.439
		<b>CY2018 TOTAL CREDITS SOLD</b>	<b>-</b>			
Salt River Wetland (AMU)	01/03/18	LRL-2015-831	0.500	\$45,840	CY2018 Beginning Balance	61.337
	04/16/18	LRL-2016-136	0.900	\$45,840	CY2018 Credit Sales	3.500
	05/18/18	LRL-2014-724	0.100	\$49,500	CY2018 Credit Releases	-
	11/07/18	LRL-2017-1103	0.700	\$49,500	CY2018 Ending Balance	57.837
	12/20/18	LRL-2018-634	1.300	\$49,500		
		<b>CY2018 TOTAL CREDITS SOLD</b>	<b>3.500</b>			
Green River Wetland (AMU)	01/22/18	LRL-2007-816	5.600	\$45,840	CY2018 Beginning Balance	153.712
	01/31/18	LRL-2016-457	1.800	\$45,840	CY2018 Credit Sales	7.400
					CY2018 Credit Releases	-
					CY2018 Ending Balance	146.312
		<b>CY2018 TOTAL CREDITS SOLD</b>	<b>7.400</b>			

Service Area	Date of Payment	Corps 404 Id. No.	Credits Sold	\$/Credit	Advanced Credits	Balance
<b>Jackson Purchase Wetland (AMU)</b>					CY2018 Beginning Balance	196.880
					CY2018 Credit Sales	-
					CY2018 Credit Releases	-
					CY2018 Ending Balance	196.880
			<b>CY2018 TOTAL CREDITS SOLD</b>	-		
<b>Lower Licking Wetland (AMU)</b>					CY2018 Beginning Balance	99.020
					CY2018 Credit Sales	-
					CY2018 Credit Releases	-
					CY2018 Ending Balance	99.020
			<b>CY2018 TOTAL CREDITS SOLD</b>	-		
<b>Lower Cumberland Wetland (AMU)</b>					CY2018 Beginning Balance	76.057
					CY2018 Credit Sales	-
					CY2018 Credit Releases	-
					CY2018 Ending Balance	76.057
			<b>CY2018 TOTAL CREDITS SOLD</b>	-		
<b>Lower Kentucky Wetland (AMU)</b>	02/14/18	LRL-2017-962	0.300	\$45,840	CY2018 Beginning Balance	89.868
	08/17/18	LRL-2018-213	0.300	\$49,500	CY2018 Credit Sales	2.100
	11/06/18	LRL-2018-302	0.200	\$49,500	CY2018 Credit Releases	-
	11/06/18	LRL-2018-744	0.800	\$49,500	CY2018 Ending Balance	87.768
	11/21/18	LRL-2016-762	0.500	\$49,500		
			<b>CY2018 TOTAL CREDITS SOLD</b>	<b>2.100</b>		
<b>Northern Kentucky Wetland (AMU)</b>					CY2018 Beginning Balance	100.000
					CY2018 Credit Sales	-
					CY2018 Credit Releases	-
					CY2018 Ending Balance	100.000
			<b>CY2018 TOTAL CREDITS SOLD</b>	-		

## **Appendix B – Project Status**



Figure 4. Project Status in the Big Sandy River Service Area

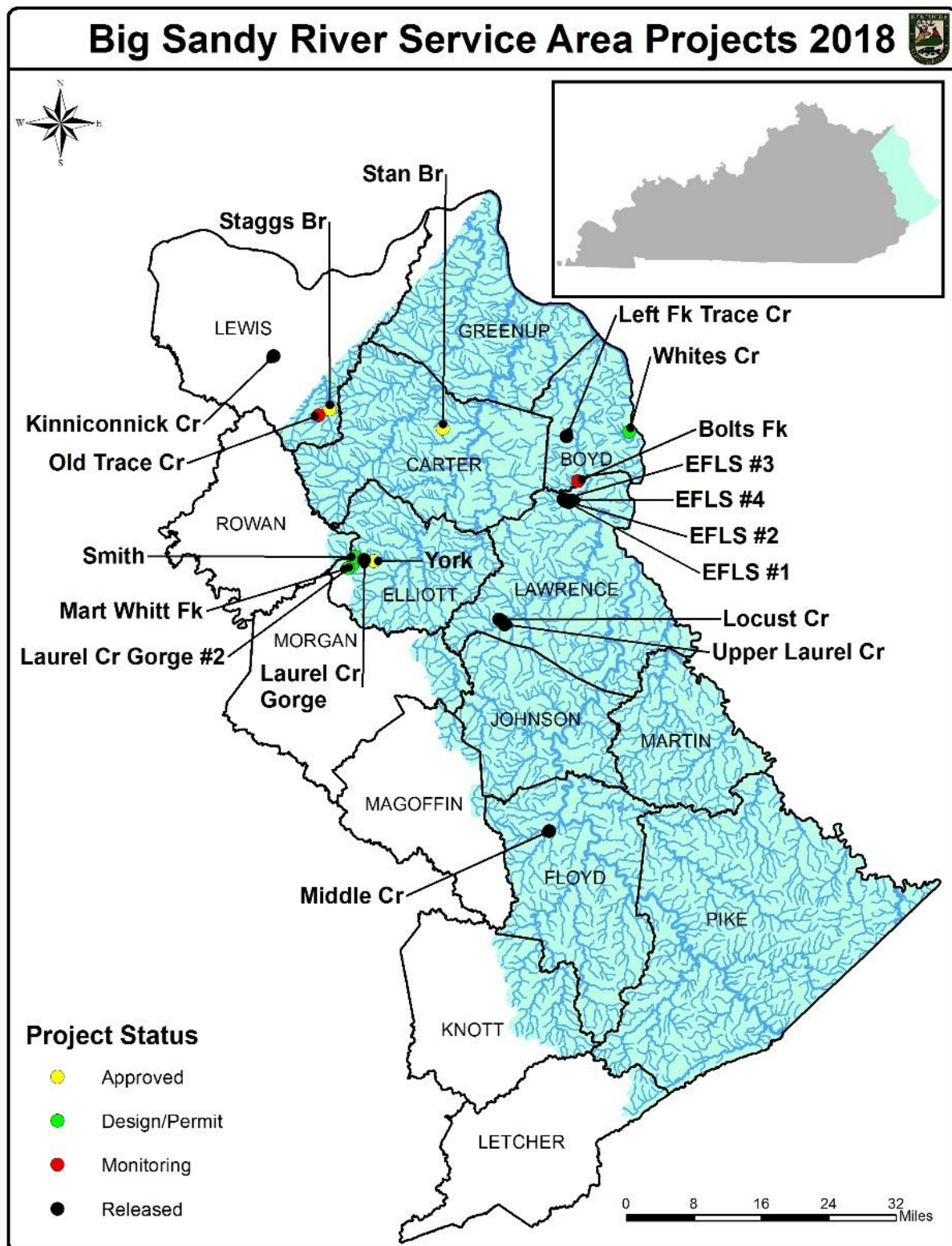


Table 11. Project Status in the Big Sandy River Service Area

Count	Project	Status	County	USACE District	404 Permit #
1	Staggs Br	Approved	Lewis	Louisville	LRL-2016-153-pgj
2	Stan Br	Approved	Carter	Louisville	LRL-2016-374-pgj
3	York	Approved	Elliott	Louisville	LRL-2013-1012-pgj
4	Laurel Cr Gorge #2	Design/Permit	Elliott	Louisville	LRL-2012-478-pgj
5	Mart Whitt Fk	Design/Permit	Elliott	Louisville	LRL-2013-598-pgj
6	Smith	Design/Permit	Elliott	Louisville	LRL-2013-1013-pgj
7	Whites Cr	Design/Permit	Boyd	Louisville	LRL-2012-634-pgj
8	Bolts Fk	Monitoring - YR 5	Boyd	Louisville	LRL-2010-698-pgj
9	Old Trace Cr	Monitoring - YR 1	Lewis	Louisville	LRL-2013-336-pgj
10	EFLS #1	Released - LTM	Lawrence	Louisville	2004-01120
11	EFLS #2	Released - LTM	Lawrence	Louisville	LRL-2009-332-pgj
12	EFLS #3	Released - LTM	Lawrence	Louisville	LRL-2008-1082-pgj
13	EFLS #4	Released - LTM	Lawrence	Louisville	LRL-2009-123-pgj
14	Kinniconnick Cr	Released - LTM	Lewis	Louisville	LRL-2007-409-pgj
15	Laurel Cr Gorge	Released - LTM	Elliott	Louisville	-
16	Left Fk Trace Cr	Released - LTM	Boyd	Louisville	2006-00160
17	Locust Cr	Released - LTM	Lawrence	Louisville	LRL-2008-1249-pgj
18	Middle Cr	Released - LTM	Floyd	Louisville	LRL-2006-1256-pgj
19	Upper Laurel Cr	Released - LTM	Lawrence	Louisville	2005-00901
1	Barrett Creek	Approved - Terminated	Carter	Louisville	LRL-2012-635
2	Ben Willim Branch	Approved - Terminated	Lewis	Louisville	-
3	Brushy Cr	Approved - Terminated	Greenup	Louisville	2004-00931
4	Buffalo Creek	Approved - Terminated	Johnson	Louisville	-
5	Cat Fork	Approved - Terminated	Lawrence	Louisville	LRL-2012-132-pgj
6	Clifty Creek	Approved - Terminated	Elliott	Louisville	LRL-2013-867-pgj
7	EFLS #5	Approved - Terminated	Lawrence	Louisville	LRL-2011-456-pgj
8	Flutylick Branch	Approved - Terminated	Martin	Louisville	-
9	Hitchins	Approved - Terminated	Carter	Louisville	LRL-2016-374-pgj
10	Ison Creek	Approved - Terminated	Elliott	Louisville	LRL-2013-222-pgj
11	Keys Creek	Approved - Terminated	Boyd	Louisville	-
12	Laurel Cr Tributary	Approved - Terminated	Elliott	Louisville	-
13	Laurel Gorge - Howard Tract	Approved - Terminated	Elliott	Louisville	LRL-2014-276-pgj
14	Laurel Tribs - Rowe Flats	Approved - Terminated	Elliott	Louisville	LRL-2013-770-pgj
15	Lovelace Fork	Approved - Terminated	Elliott	Louisville	LRL-2015-1022-pgj
16	Pigeon Roost	Approved - Terminated	Boyd	Louisville	LRL-2012-26-pgj
17	Schultz Creek	Approved - Terminated	Greenup	Louisville	2009-806
18	White Oak Creek	Approved - Terminated	Greenup	Louisville	LRL-2012-787-pgj

Figure 5. Project Status in the Upper Cumberland River Service Area

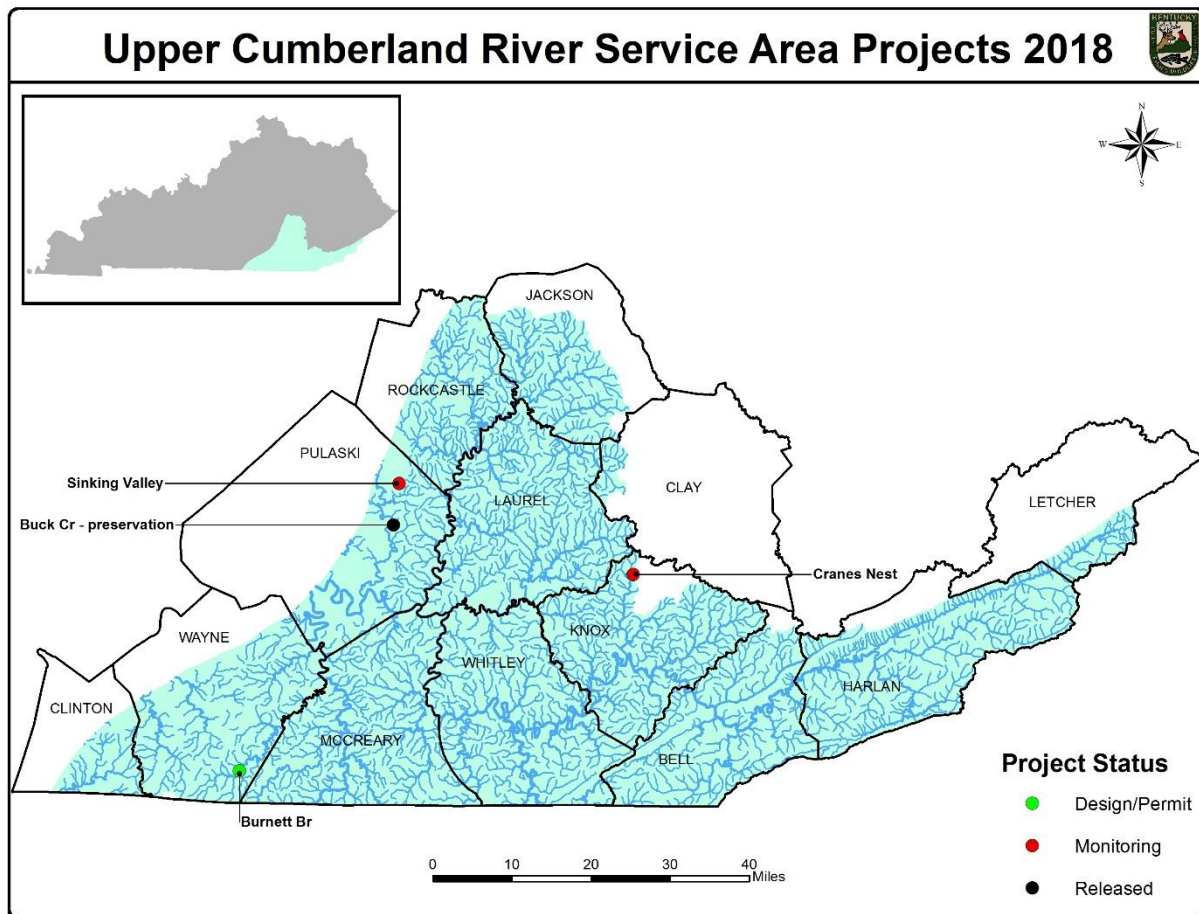


Table 12. Project Status in the Upper Cumberland River Service Area

Count	Project	Status	County	USACE District	404 Permit #
1	Burnett Br	Design/Permit	Wayne McCreary	Nashville	LRN-2013-00116
2	Cranes Nest	Monitoring - YR 5+	Knox	Nashville	2009-01424
3	Sinking Valley	Monitoring - YR 5	Pulaski	Nashville	LRN-2012-00326
4	Buck Cr - preservation	Released - LTM	Pulaski	Nashville	-
1	Steele Branch	Approved - Terminated	Wayne McCreary	Nashville	LRN-2012-01244
2	Mulberry Cr	Approved - Terminated	Whitley	Nashville	LRN-2016-00783

Figure 6. Project Status in the Lower Cumberland River Service Area

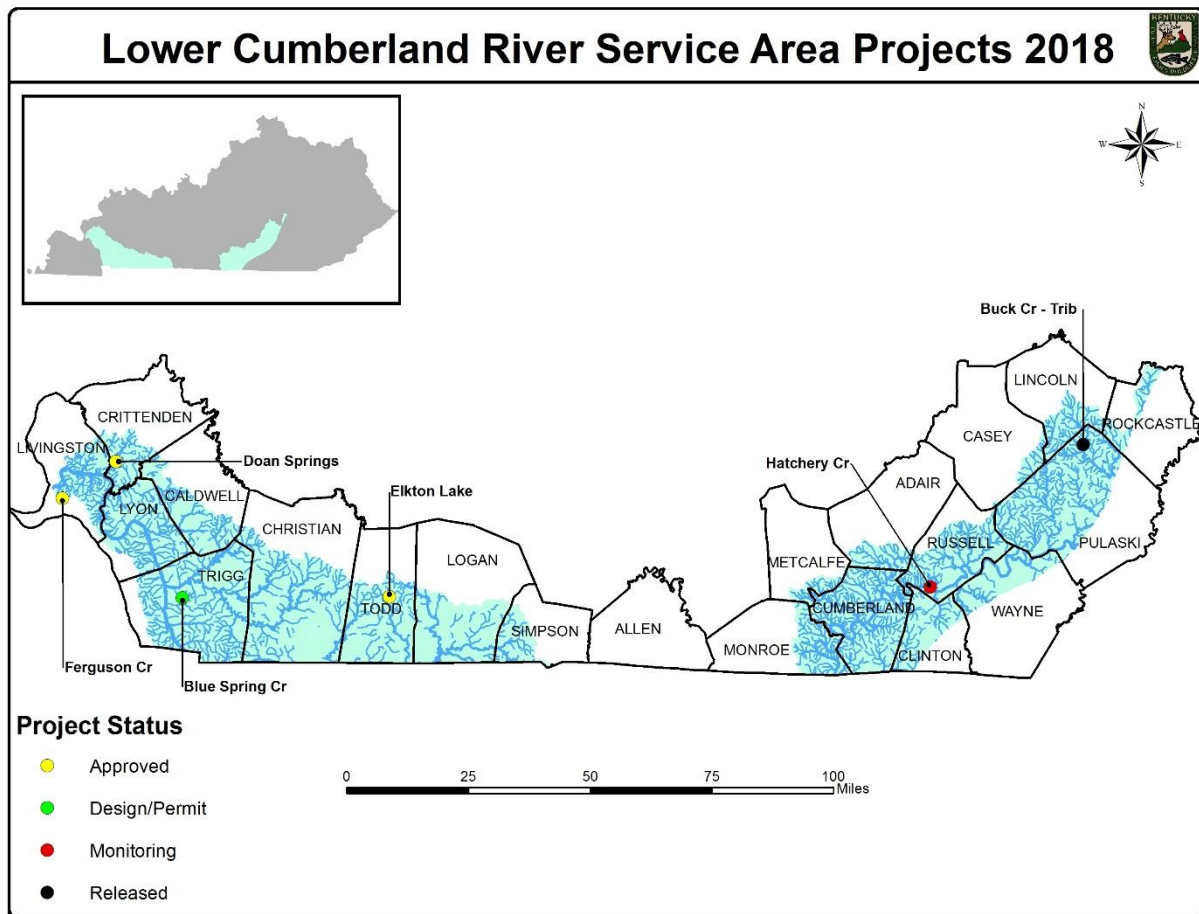


Table 13. Project Status in the Lower Cumberland River Service Area

Count	Project	Status	County	USACE District	404 Permit #
1	Doan Springs	Approved	Crittenden	Nashville	LRN-2017-00426
2	Elkton Lake	Approved	Todd	Nashville	LRN-2018-00451
3	Ferguson Cr	Approved	Livingston	Nashville	LRN-2018-00128
4	Blue Spring Cr	Design/Permit	Trigg	Nashville	LRN-2013-00776
5	Hatchery Cr	Monitoring - YR 3	Russell	Nashville	LRN-2010-00444
6	Buck Cr - Trib	Released - LTM	Pulaski	Nashville	LRN-2006-2255
1	Puncheon Cr	Approved - Terminated	Pulaski	Nashville	-
2	Bear Den Hollow	Approved - Terminated	Pulaski	Nashville	LRN-2016-00784



Figure 7. Project Status in the Upper Licking River Service Area

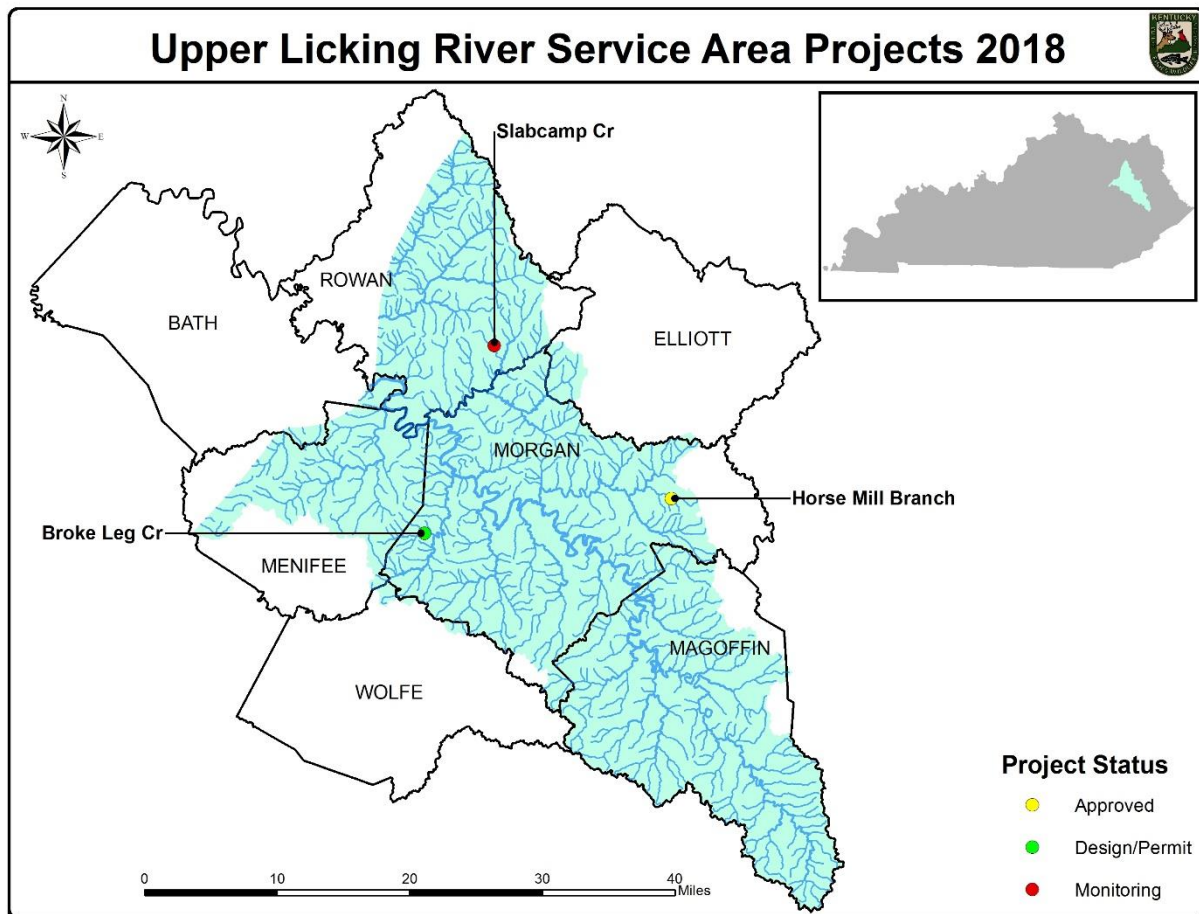


Table 14. Project Status in the Upper Licking Service Area

Count	Project	Status	County	USACE District	404 Permit #
1	Horse Mill Branch	Approved	Morgan	Louisville	LRL-2018-00100
2	Broke Leg Cr	Design/Permit	Morgan	Louisville	LRL-2016-00371-pgj
3	Slabcamp Cr	Monitoring - YR 5+	Rowan	Louisville	LRL-2009-762-pgj
1	Straight Cr	Approved - Terminated	Morgan	Louisville	LRL-2015-896
2	Slabcamp Cr #2	Approved - Terminated	Rowan	Louisville	-

Figure 8. Project Status in the Lower Licking River Service Area

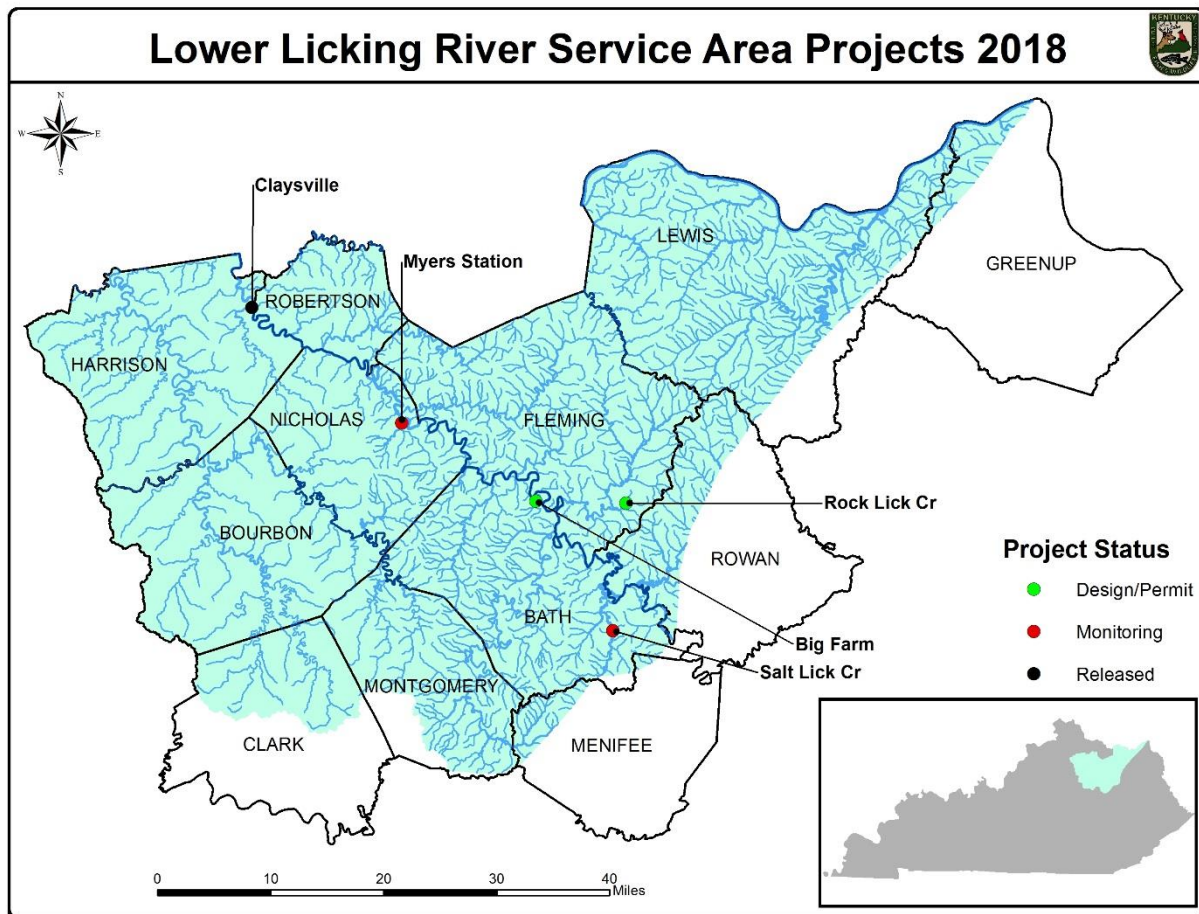


Table 15. Project Status in the Lower Licking Service Area

Count	Project	Status	County	USACE District	404 Permit #
1	Big Farm	Design/Permit	Bath	Louisville	LRL-2014-209-pgj
2	Rock Lick Cr	Design/Permit	Fleming	Louisville	LRL-2016-393
3	Myers Station	Monitoring - YR 2	Nicholas	Louisville	LRL-2012-637-pgj
4	Salt Lick Cr	Monitoring - YR 5+	Bath	Louisville	LRL-2011-891-pgj
5	Claysville	Released - LTM	Bath	Louisville	LRL-2011-891-pgj
1	Martin Mill Branch	Approved - Terminated	Fleming	Louisville	LRL-2014-443-pgj
2	Greasy Cr	Approved - Terminated	Robertson	Louisville	-

Figure 9. Project Status in the Upper Kentucky River Service Area

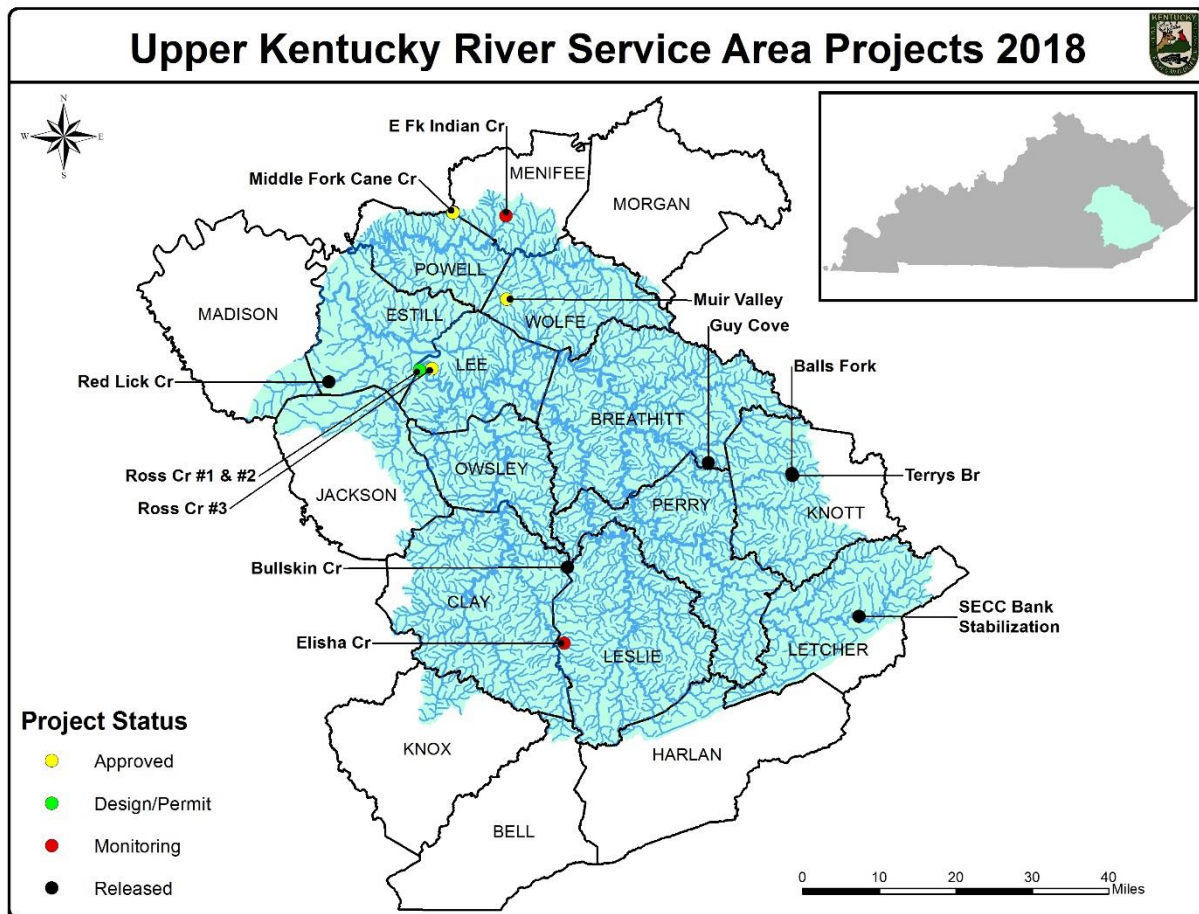


Table 16. Project Status in the Upper Kentucky River Service Area

Count	Project	Status	County	USACE District	404 Permit #
1	Middle Fork Cane Cr	Approved	Powell	Louisville	LRL-2015-583-pgj
2	Muir Valley	Approved	Wolfe	Louisville	LRL-2016-1060
3	Ross Cr #3	Approved	Lee	Louisville	LRL-2017-00042
4	Ross Cr #1 & #2	Design/Permit	Lee	Louisville	LRL-2013-143
5	E Fk Indian Cr	Monitoring - YR 3	Meniffee	Louisville	LRL-2012-273
6	Elisha Cr	Monitoring - YR 5+	Leslie	Louisville	LRL-2011-404-pgj
7	Balls Fork	Released - LTM	Knott	Louisville	2002-01447
8	Bullskin Cr	Released - LTM	Leslie	Louisville	2005-00205-pgj
9	Guy Cove (Laurel Fork)	Released - LTM	Breathitt	Louisville	LRL-2007-615
10	Red Lick Cr	Released - LTM	Estill	Louisville	LRL-2005-131-lad
11	SECC Bank Stabilization	Released - LTM	Letcher	Louisville	LRL-2005-1004-the
12	Terrys Br	Released - LTM	Knott	Louisville	2005-00205
1	Upper Cane Creek	Approved - Terminated	Meniffee	Louisville	LRL-2009-433-pgj
2	Frozen Creek	Approved - Terminated	Breathitt	Louisville	-
3	Hinton Branch	Approved - Terminated	Estill	Louisville	-
4	North Fork Kentucky River	Approved - Terminated	Perry	Louisville	-
5	Red Lick #2	Approved - Terminated	Estill	Louisville	-
6	Holly Fork	Approved - Terminated	Owsley	Louisville	LRL-2015-1020-pgj
7	Sand Lick	Approved - Terminated	Powell	Louisville	-
8	Troublesome Cr	Approved - Terminated	Perry	Louisville	-
9	Persimmon Hollow	Approved - Terminated	Leslie	Louisville	-



Figure 10. Project Status in the Lower Kentucky River Service Area

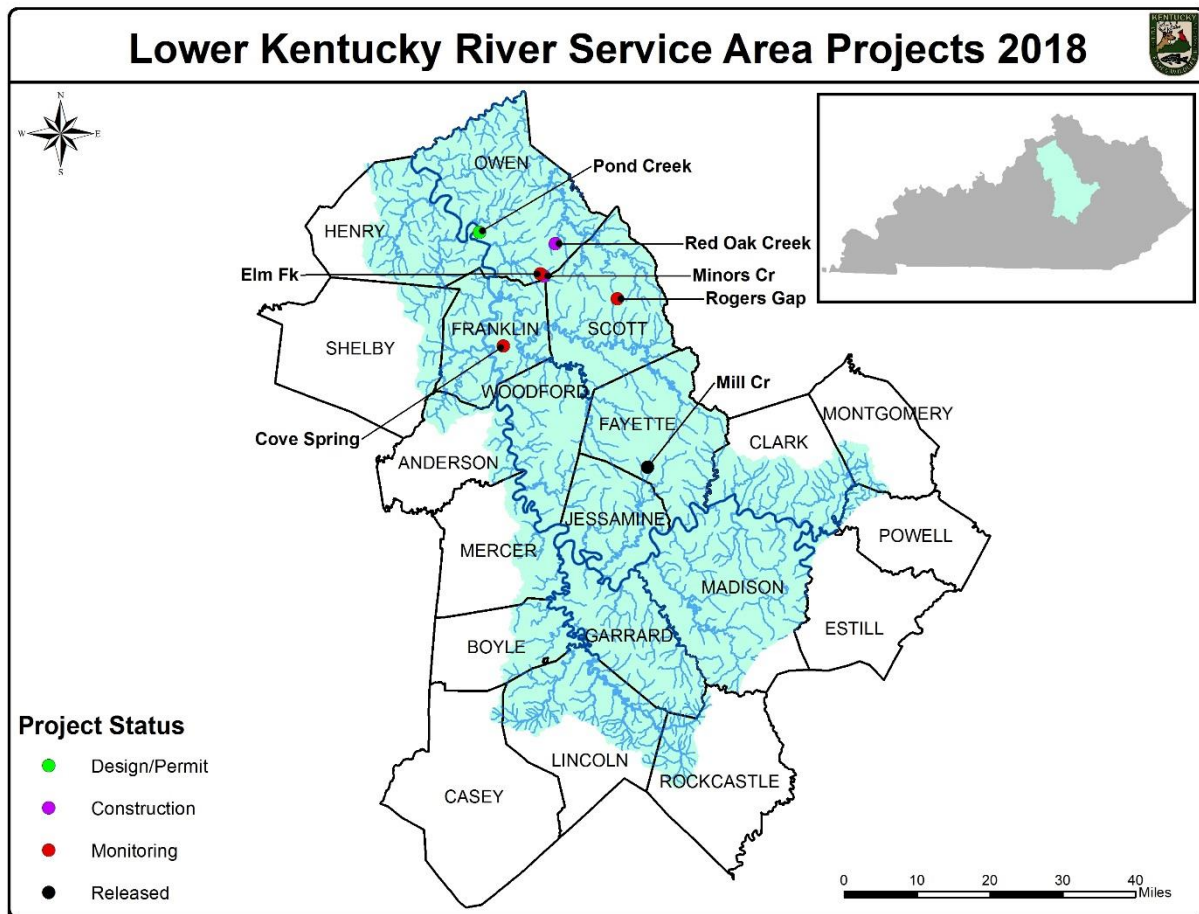


Table 17. Project Status in the Lower Kentucky River Service Area

Count	Project	Status	County	USACE District	404 Permit #
1	Pond Creek	Design /Permit	Owen	Louisville	LRL-2014-191-pgj
2	Minors Cr	Construction	Owen	Louisville	LRL-2013-91-pgj
3	Red Oak Creek	Construction	Owen	Louisville	LRL-2014-500-pgj
4	Cove Spring	Monitoring - YR 5	Franklin	Louisville	LRL-2009-614 pgj
5	Elm Fk	Monitoring - YR 4	Owen	Louisville	LRL-2012-263-pgj
6	Rogers Gap	Monitoring - YR 2	Scott	Louisville	LRL-2013-134-pgj
7	Mill Cr	Released - LTM	Fayette	Louisville	LRL-2009-611-pgj
1	Boling Branch	Approved - Terminated	Henry	Louisville	LRL-2017-261
2	Wolf Run	Approved - Terminated	Fayette	Louisville	200600323-pgj

Figure 11. Project Status in the Salt River Service Area

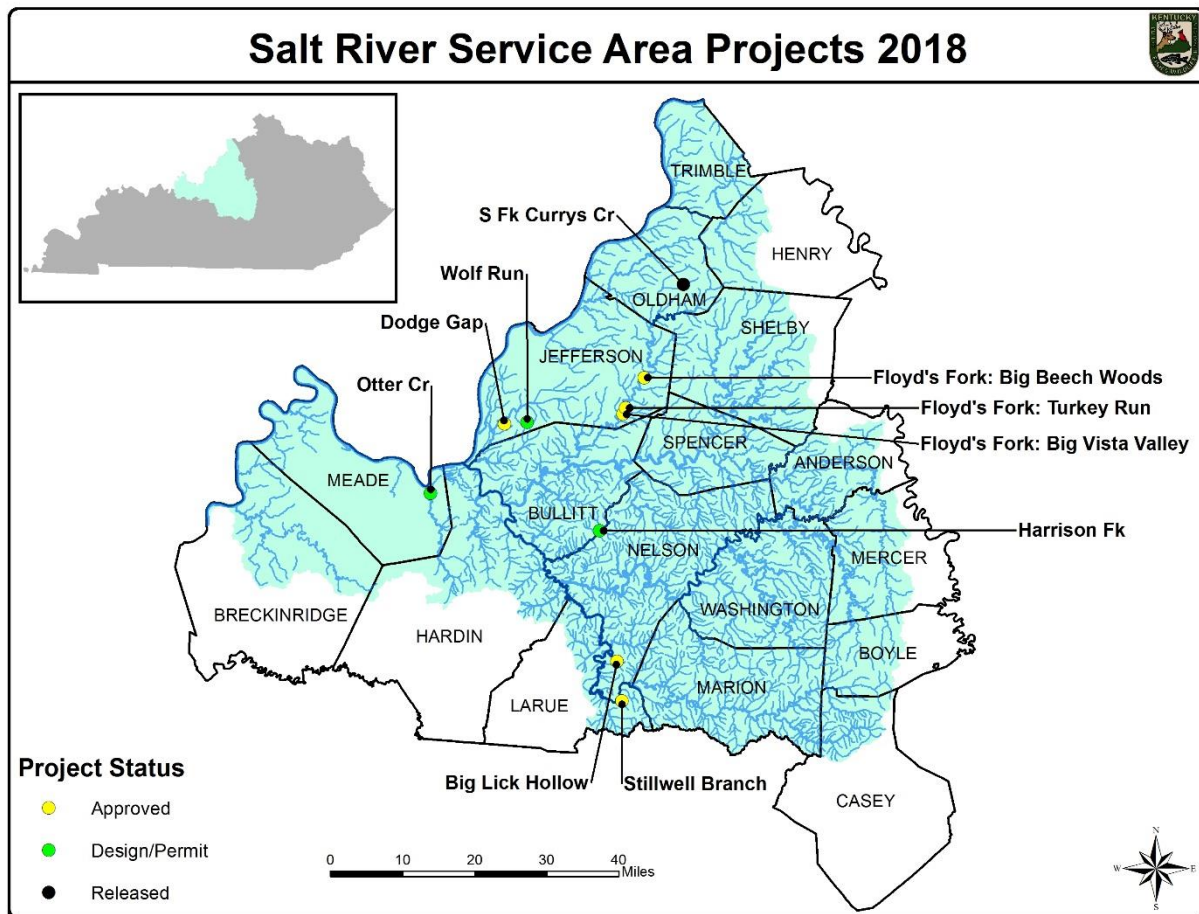


Table 18. Project Status in the Salt River Service Area

Count	Project	Status	County	USACE District	404 Permit #
1	Big Lick Hollow	Approved	Nelson	Louisville	LRL-2018-00383-pgj
2	Dodge Gap	Approved	Jefferson	Louisville	LRL-2018-00112
3	Floyd's Fork	Approved	Jefferson	Louisville	LRL-2015-216-pgj
4	Stillwell Branch	Approved	Larue	Louisville	LRL-2017-00906-pgj
5	Harrison Fk	Design/Permit	Nelson	Louisville	LRL-2012-274-pgj
6	Otter Cr	Design/Permit	Meade	Louisville	LRL-2013-425-pg
7	Wolf Run	Design/Permit	Jefferson	Louisville	LRL-2014-60-pgj
8	S Fk Curry's Cr	Released - LTM	Oldham	Louisville	LRL-2009-98-pgj

Figure 12. Project Status in the Green River Service Area

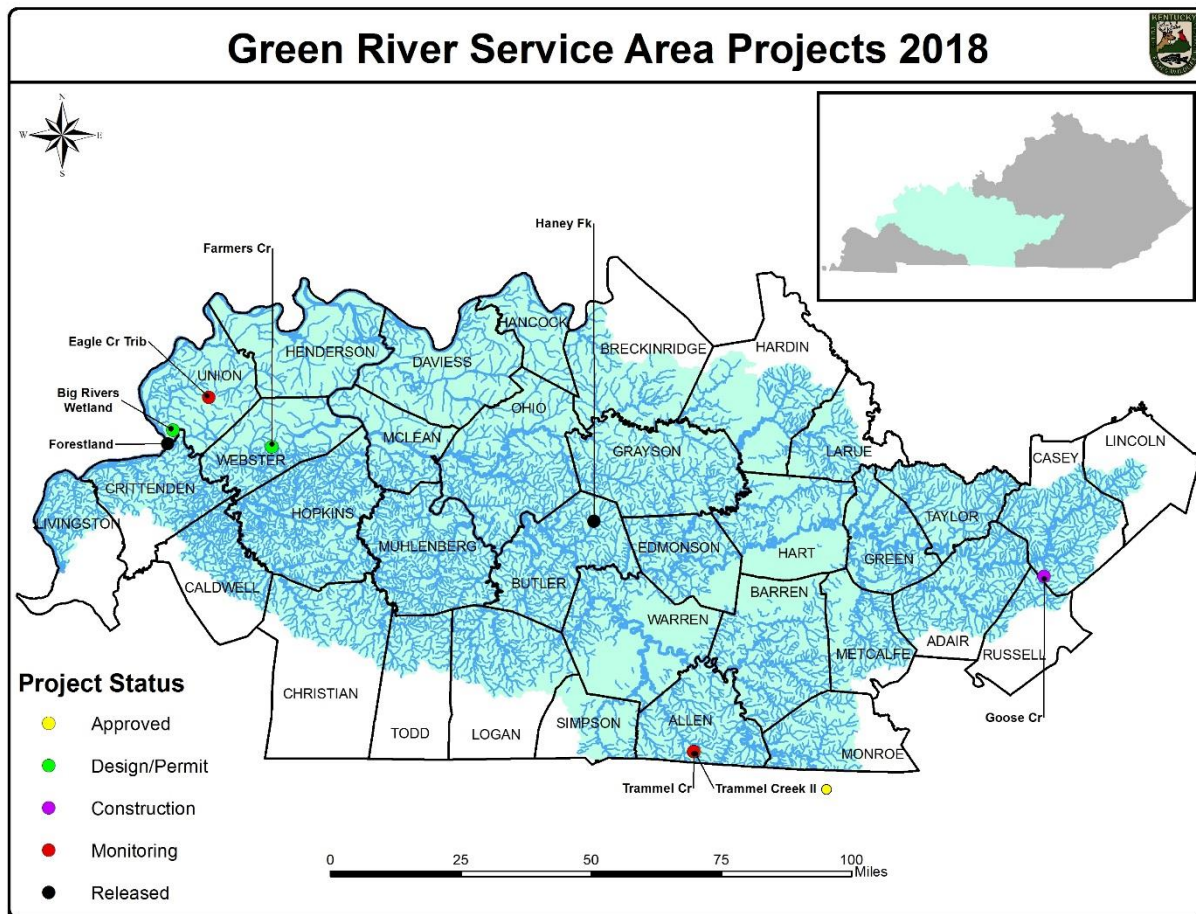


Table 19. Project Status in the Green River Service Area

Count	Project	Status	County	USACE District	404 Permit #
1	Trammel Creek II	Approved	Allen	Louisville	LRL-2018-00320-pgj
2	Big Rivers Wetland	Design/Permit	Union	Louisville	LRL-2016-373-pgj
3	Farmers Cr	Design/Permit	Webster	Louisville	LRL-2014-58-pgj
4	Goose Cr	Construction	Casey	Louisville	LRL-2012-646-pgj
5	Eagle Cr Trib	Monitoring - YR 2	Union	Louisville	LRL-2012-716 pgj
6	Trammel Cr	Monitoring - YR 5+	Allen	Louisville	LRL-2008-936-pgj
7	Forestland	Released - LTM	Union	Louisville	-
8	Haney Fk	Released - LTM	Butler	Louisville	LRL-2004-01363
1	Green River Lock and Dam 6	Approved - Terminated	Edmonson	Louisville	LRL-2016-43-pgj
2	Boys Cr	Approved - Terminated	Barren	Louisville	LRL-2013-545-pgj

Figure 13. Project Status in the Jackson Purchase Service Area

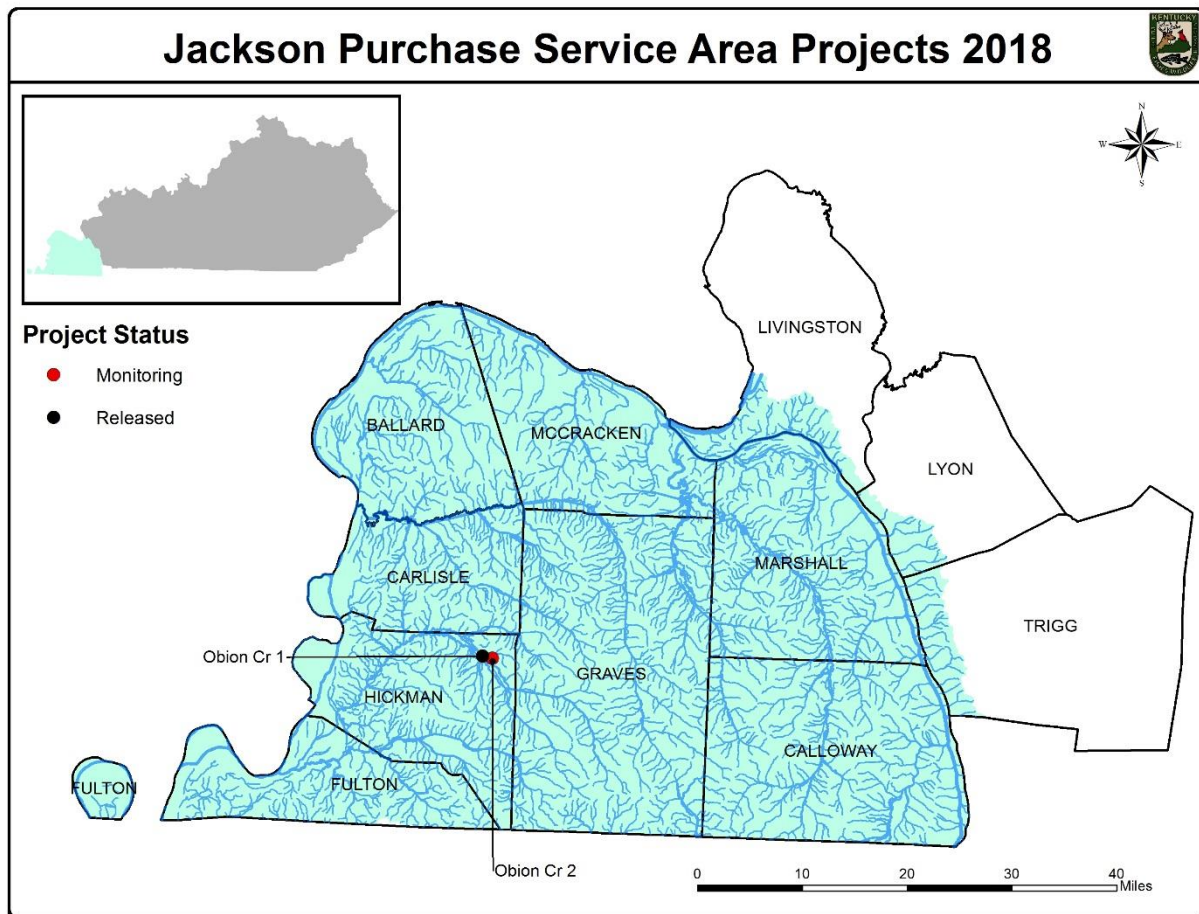


Table 20. Project Status in the Jackson Purchase Service Area

Count	Project	Status	County	USACE District	404 Permit #
1	Obion Cr 2	Monitoring - YR 2	Hickman	Memphis	MVM-2010-074
2	Obion Cr 1	Released - LTM	Hickman	Memphis	2003-00263
1	East Fork Clark's River	Approved - Terminated	Calloway	Nashville	-

## **Appendix C – Compliance and Long Term Management Activities**



## Long Term Management Activities

The following sites are in the Long Term Management (LTM) phase. These sites are released from monitoring and visited annually (at a minimum) by KDFWR staff. Prior to the site visit, a letter mailed to the project landowner(s) notifies them of upcoming visits and provides contact information for KDFWR FILO Staff. The narrative below includes field notes from the 2018 site visits. Site photos are available upon request.

BM-Bethany Mulhall  
TB-Tom Burberry  
KS-Kristy Stroud

JE-Jessica East  
MB-Mitchell Boles

RL-Rob Lewis  
JB-Jessie Boles

### *Big Sandy River Service Area – LTM Sites*

#### East Fork Little Sandy #1-4 (7-10-18)

TB and MB viewed all of the East Fork Little Sandy (EFLS) sites, including those on Little East Fork. The majority of the project area had no signs of easement encroachments or stability issues. The easement has developed into a scrubby habitat type consisting of mainly willow and sycamore trees along with dense herbaceous vegetation. Beaver dams are present throughout the project lengths. The previously cut tributaries on the Mullet (formerly McNeil) property were reviewed. Although the new landowner cut trees on the site in 2017, he did not remove the stumps allowing for re-sprout. This is being considered a temporary impact and the landowner indicated he was unaware of an easement when acquiring the property. The easement documents were later provided to the new landowner along with verbal a warning to stop all actions that violate the easement. No new easement violations were observed in 2018.

#### Kinniconick and Indian Creek (7-11-2018)

The site was visited by BM and JE. No easement encroachments were noted and the project appears stable.

#### Laurel Creek Gorge

The site was visited by FILO staff en route to surrounding projects. No easement encroachments were noted and the project appears stable.

#### Left Fork Trace Creek (7-10-2018)

The site was visited by BM and JE. No easement encroachments were noted and the project appears stable.

#### Locust Creek (7-10-2018)

The site was visited by BM and JE and appeared stable and well vegetated. No easement encroachments were noted. Mr. Marcum, a landowner who recently purchased the upstream end of the project area (formerly Bell property), indicated he was aware of the easement and in agreement with the terms. For further information, copies of the easement were mailed to his addresses upon return to the office.

#### Middle Creek (7-16-2018)

The site was visited by BM and JE. On the upstream end of the project, no easement violations were noted. The easement marker signs were in place. On the downstream third of the project, some mowing and hay baling occurred beyond the easement marker signs. Conversations with the property manager regarding this issue are ongoing. Survival of previously planted balled and bur lapped trees was evident.

#### Upper Laurel Creek (7-10-2018)

The site was visited by BM and JE. No easement encroachments were noted and the project appears stable.

### ***Upper Cumberland River Service Area – LTM Sites***

#### Buck Creek Preservation

The site remains under KDFWR ownership and protection.

### ***Lower Cumberland River Service Area – LTM Sites***

#### Buck Creek-Trib

The Nature Conservancy provided the permanent protection on this mitigation site. BM corresponded with The Nature Conservancy and confirmed that the project has not changed.

### ***Lower Licking River Service Area – LTM Sites***

#### Claysville Land Acquisition Site (7-12-2018)

The site was visited by BM and JE. No encroachments were noted. The site appeared to be under the same ownership as land use and management practices did not differ from previous visits or accounts from previous monitoring reports.

### ***Upper Kentucky River Service Area – LTM Sites***

#### Balls Fork and Terry's Branch (4-11-2018)

The sites were visited by JB and RL. The easement was intact with native vegetation and no easement encroachments were noted. All repaired areas are stable and functioning properly.

#### Bullskin Creek (11-8-2018)

The site was visited by BM and JE. No easement encroachments were noted. The project appeared to be stable and there were some larger trees present in the riparian area including black willow and some oak trees. There were some native herbaceous species in the riparian zone, but Japanese Knotweed still made up a large component of the zone. A large beaver dam was constructed on the upper third of the project and created an impoundment, but this is not viewed as a detriment to the project. Overall, the project appeared to be stable and trending toward a mature riparian zone.

#### Guy Cove-UK Laurel Fork (7-27-2018)

BM and JE attempted a site visit in July 2018 that was unsuccessful due to a road washout. The surrounding accessible property is under the same ownership and management by KDFWR and

the University of Kentucky (UK). Upon return, UK staff were contacted and they sent FILO recent photos of the site. The photos and correspondence with UK staff indicated that the site appeared in similar or better condition compared to previous site visits, including presence of dense, native vegetation. Easement violations were not observed in the photos or from communication with UK land management staff.

#### Red Lick Creek (7-9-2018)

The site was visited by JE. No easement encroachments were noted. The riparian zone was dense with native vegetation and the project appeared stable.

#### SECC Bank Stabilization

BM made contact with the college staff and confirmed that the project remains the same.

### ***Lower Kentucky River Service Area – LTM Sites***

#### Mill Creek Elementary (7-9-2018)

The site was visited by BM and JE. No easement encroachments were noted and the project appears stable. The completion and filing of easement documentation is still pending.

### ***Green River Service Area – LTM Sites***

#### Haney Fork (7-18-2018)

The site was visited by BM and TB. Upon approaching the site, signs were present indicating protection by “Southern Conservation Corp”. Site observations showed no disturbances or encroachments on the property. Early successional growth proved so thick making it difficult to navigate on foot. Trees appeared dense, diverse and native. Many oak species, persimmon, and early successional sycamore volunteers were observed. The landscape also included meadow characteristics that appeared undisturbed and heavily used by wildlife. All drainages appeared undisturbed and heavily vegetated.

#### Forestland

Located on Big Rivers WMA, this preservation project protects the Tradewater River corridor via deed restrictions and state regulations that limit incompatible activities on wildlife management areas. No encroachments on the corridor have been identified by KDFWR staff.

### ***Jackson Purchase Service Area – LTM Sites***

#### Obion Creek 1 (11-2018)

The site was visited by KS. No easement encroachments were noted.



## **Appendix D – Approved Compensatory Mitigation Projects**

Table of Corps Approved Mitigation Projects: KDFWR Mitigation Program - Louisville LRL-2010-325							
PROJECT	COUNTY	SERVICE AREA	Instrument Mod. No.	404 PERMIT ID.NO.	404 PERMIT APPROVAL DATE	401 WQC ID. NO.	401 WQC APPROVAL DATE
ILF-KDFWR Elm Fork/Kleber WMA Stream Restoration Project (MOA)	Owen	Lower Kentucky River Service Area	2	LRL-2012-263-pgj	02/12/12	AI: 114622	05/07/14
ILF-KDFWR Indian Creek Stream Restoration Project (MOA)	Menifee	Upper Kentucky River Service Area	3	LRL-2012-273-pgj	07/09/13	2013-009-1	03/07/13
ILF-KDFWR Roger's Gap Stream Restoration Project (MOA)	Scott	Lower Kentucky River Service Area	4	LRL-2012-134-pgj	11/26/13	2013-026-1	06/13/13
ILF-KDFWR Eagle Creek Tributaries Restoration Project (MOA & ILF-I)	Union	Green River Service Area	5	LRL-2012-716-pgj	01/23/15	2014-18-1M	06/14/14
ILF-KDFWR Myer's Station Stream Restoration (ILF-I)	Nicholas	Lower Licking River Service Area	6	LRL-2012-637-pgj	04/20/16	2016-004-1	01/15/16
ILF-KDFWR Old Trace Creek Restoration (ILF-I)	Lewis	Big Sandy River Service Area	7	LRL-2013-336-pgj	02/13/17	2016-029-1	04/26/16
KDFWR ILF Instrument Full Modification (to add 9 counties/change SA)	All	9 County Region	8	LRL-2010-325		NA	
ILF-KDFWR Goose Creek Restoration (ILF-I)	Casey	Green River Service Area	9	LRL-2012-646-pgj	03/22/17	2016-090-7	09/21/16
ILF-KDFWR Minor's Creek Restoration (ILF-I)	Owen, Franklin	Lower Kentucky River Service Area	10	LRL-2013-091-pgj	05/22/17	2016-097-1	10/31/16
ILF-KDFWR Ross Creek Stream & Wetland Restoration Phase I & II (MOA & ILF-I)	Lee, Estill	Upper Kentucky River Service Area	11	LRL-2013-143-pgj	10/26/17	2016-111-7R	09/25/17
ILF-KDFWR Red Oak Drainage C Stream Restoration Project (ILF-I)	Owen	Lower Kentucky River Service Area	12	LRL-2014-500-pgj	04/17/18	2017-091-1	03/01/17
Table of Corps Approved Mitigation Projects: KDFWR Mitigation Program - Nashville LRN-2011-00709							
PROJECT	COUNTY	SERVICE AREA	Instrument Mod. No.	404 PERMIT ID.NO.	404 PERMIT APPROVAL DATE	401 WQC ID. NO.	401 WQC APPROVAL DATE
Sinking Valley Preservation Project	Pulaski	Upper Cumberland	2	LRN-2012-00326	12/11/2013	n/a	n/a
Hatchery Creek Restoration Project	Russell	Lower Cumberland	3	LRN-2010-00444	7/25/2014	23-041-7M(3)	7/15/2014
Table of Corps Approved Mitigation Projects: KDFWR Mitigation Program - Memphis MVM-2013-95							
PROJECT	COUNTY	SERVICE AREA	Instrument Mod. No.	404 PERMIT ID.NO.	404 PERMIT APPROVAL DATE	401 WQC ID. NO.	401 WQC APPROVAL DATE
Obion II	Hickman	Jackson Purchase	1	MVM-2010-074	4/29/2014	2010-027-1	3/23/2010